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The Week's Panorama

Recovery Proceeds . . . . . .

Having advanced sharply since the beginning of September, industrial production now probably is above the peak of the 1936-1937 boom. The Federal Reserve Board index was at 110 percent of the 1923-1925 average for September, and it may be now above the recovery peak of 118 reached in 1937. However, consumption of goods by industry and individuals has not kept quite abreast of factory output, and business has been cautioned by the board to avoid overexpansion of production.

Profits in Oil . . . . . .

The oil industry will not make as good a showing as business in general for the third quarter and for the first 9 months, due to low product prices until lately and to the half-month crude production shutdowns in August. It is indicated that for the first 9 months, oil companies in the aggregate will show 25 or 30 percent less profit this year than last year, despite recent improvement of conditions. The industry earned about 38 percent less in the first half of 1939 than in the initial half of 1938, after profits had lagged about 60 percent for the first quarter.

War and Oil . . . . . .

War-stimulated demand for oil has continued more a hope than a reality. Exports to neutral countries as well as belligerents are being retarded through shipping difficulties, although business is expected to develop eventually. Moreover, the nature of the war has not been conducive to urgent demand by belligerents. . . . The Bureau of Mines has estimated, with the aid of exporters, that exports of gasoline in November will aggregate 3,900,000 barrels, or 5.5 percent more than the 3,698,000 barrels exported in November of last year.

Pennsylvania Price . . . . .

The Pennsylvania Oil Producers' Association has declared that prices for Pennsylvania grade crude would not be excessive if marked up 57 cents a barrel. The price now is $2.25 a barrel, as compared with $2.82 in 1937, whereas prices of lubricants made from the crude are better now than in 1937. While good lubricant prices were mentioned as making better crude prices possible, the association based its advocacy of higher crude postings primarily on the contention that present prices, although lately improved, still are not adequate in relation to producing costs.

Louisiana Suit . . . . . .

The suit of Glassell and Glassell, Jennings field operators, attacking constitutionality of the Louisiana oil conservation law, may preclude prosecution of federal hot oil indictments against prominent former state officials. The hot oil law was not intended as an aid in enforcing any but valid state conservation laws.

Mississippi Oil . . . . . .

A group of land and royalty owners has protested to the Mississippi Oil and Gas Commission against its order limiting drilling in the new Yazoo City field to one well on 40 acres. The new oil field, first in Mississippi and located to the east of the North Louisiana fields, is producing from about 4550 feet.

Regardless of the eventual importance of Mississippi as an oil producing state, the industry apparently need not fear a reoccurrence of wide open flow as has characterized Illinois, since Mississippi has been looking forward to this day and already has a conservation statute.

Shut Down 11 Days . . . . .

In staying within market demand, Texas fields will be shut down 11 out of the 30 days of November. Closings were ordered by the railroad commission for the 4 Saturdays and 4 Sundays of the month and also for November 1, 15, and 30. . . . It will be almost as if fields were shut down every other day.

Subterfuge Charged . . . . .

Opposition to suggested reduction of statutory minimum allowables of East Texas wells from 20 to 15 barrels daily or less has been reiterated by directors of the East Texas Oil Asociation at Kilgore, through H. P. Nichols, executive vice president. Nichols has further declared that Saturday and Sunday shutdowns constitute a subterfuge, through which the Texas Railroad Commission limits East Texas wells to daily average production of about 14 barrels daily, as against the 20 barrels authorized by law.

New Labor Standards . . . .

The revised requirements of the Fair Labor Standards Act, effective October 24, cause little difficulty in the oil industry with regard to hourly wage rates, as oil workers are paid far above the 30 cents an hour now prescribed, instead of the 25 cents during the past year. However, further revisions in working schedules have been necessary in consequence of reducing the regular work week from 44 to 42 hours. To avoid paying over-time rates, companies must work more employees into their organizations.

Farish Answers Charges of Practices and Monopoly

WITH an admonition against hasty adoption of the O'Mahoney licensing bill or other panaceas for the ills of industry and declarations stating there is free enterprise and fair practices in existence ringing in its ears, the Temporary National Economic Committee on October 25 rang down the curtain on 4½ weeks of investigation of conditions in the oil industry.

Both the warning and the assertions came from W. S. Farish, president of Standard Oil Company (New Jersey), the final witness, who declared "there is no condition in the oil industry which would justify any drastic overturn of established business relationship," in telling the committee that there is competition in the oil industry, that the small independent doesn't have a chance and that unfair practices are not generally resorted to, and warning against concentration on particular points as "causing loss of perspective and diverting attention from the main lines of the inquiry."

Nearly Two Million Words

Observers estimated that it took something in the neighborhood of 1,750,000 words, nearly 400 exhibits and approximately 40 witnesses to tell the story of the economic position of the industry. The transcript was the heaviest of any accumulated by the TNEC in any of the industrial investigations it has made so far.

Net results of the inquiry have yet to be evaluated; they could not be abstracted from the welter of words which descended upon the committee in continuous flood from September 25 to October 25 at a cost to the industry and the men in it variously estimated at up to $600,000.

Except for Senator Joseph C. O'Mahoney of Wyoming, chairman of the group, whose questions to witnesses demonstrated his faith in his bill for the Federal licensing of interstate corporations as a cure for the ills of small, independent industry, none of the members of the TNEC indicated any firm views as to the best method of solving the problems which had been laid before them.

Three Sides Presented

As was to be expected, the representatives of the major companies, while admitting there were situations which needed adjustment, contended there is no monoply, that integration is not in itself an evil, and that there is no intent of practicing unfair methods against small competitors.

As was also to be expected, the representatives of the independent producers, refiners and marketers charged unfair practices, asserted proration was being used to fix prices for the benefit of the majors and contended that the ownership of pipe lines by the integrated companies was an evil.

Major representatives and Colonel Ernest O. Thompson of the Texas Railroad Commission, the only state spokesman to appear, defended proration and stressed the need for and advantages of conservation.

Not the least interesting feature of the hearings were the presentations of Federal agencies. The Federal Trade Commission, it was disclosed, would welcome an appropriation by Congress for a full investigation of conditions in the marketing branch of the industry; the Department of Justice, inferentially backing up the O'Mahoney licensing bill, assailed the lax state corporation laws and "flexible" accounting methods of corporations; and the National Resources Planning Board, concerned with conservation, through its weight behind the administration-sponsored Cole bill to force the states to adopt production control.

Present plans of the TNEC call for the filing of a report and recommendations for legislation some time in February.

Small Man Has Chance

In a statement, explanatory of arguments in a 20,000-word analysis which he filed, Farish assured Chairman O'Mahoney that the major companies took the TNEC "very seriously" as another evidence of a "long heritage of misunderstanding" dating back to the old Standard Oil trust.

There is a much smaller concentration in the industry today than at the time of the dissolution of that trust, he said, but the influence of concentration of economic control on competition cannot be measured statistically.

"The real question which interests your committee is the opportunities that exist for the small business man," he declared, pointing out that most of the oil in this country was discovered by the "small" man and that the independents' share of total crude reserves has recently increased; that the number of independent producers is increasing, and that the marketing branch of the industry is dependent on the small business man.

"It is true that small refiners are at a disadvantage," he testified. "This is the result of the relation of cost to the scale of operation and to the uneconomic advantage of some locations.

"The small firm has little opportunity in trunk pipe lines, but development of the transport truck again gives the small man an opportunity in the transportation branch.

"There are different degrees of opportunity for small enterprise in the several divisions of the industry depending upon the economic and technical facts," he commented. "The balance of advantage between large and small operation tends to shift as the economic and technical facts change."

Asked by Chairman O'Mahoney whether he thought there should be a limit to the size of industrial units, Farish asserted the belief that "size in itself carries a sufficient handicap to protect the public."

Defends Integration

Farish said integration is necessary in the industry because of a high degree of mutual interdependence between various branches.

"This matter of integration is important because it has direct bearing on the objectives which your committee has in mind," he said. "Integration is one of the explanations of the industry's good employment record; integration is likewise one of the essential conditions for bringing about a flow of savings into the capital structures of this industry.

"Integration does not produce earnings automatically. But the integrated form of organization does help very greatly to insure continuity of the enterprise and to stabilize such earnings as the skill of management is able to produce."

Much of the argument against integration has been based on pipe line earnings, Farish said, testifying that such earnings are not actually as high as they have been made to appear by the methods of analysis used by the Department of Justice which, he charged, unfairly excluded certain assets of the pipe line companies.

Prices, he said, move up and down because of competitive conditions and not because of any collusion between the companies. There is misunderstanding as to the posted price system and of so-called price leadership, the latter being merely the interpretation of marketing conditions by one company in advance of others.

Explains Conservation

As had previous witnesses, Farish explained that conservation is simply scientific approach to the problem of getting the most oil out of the ground at a reasonable cost, and that a closer realization of

Unfair in Oil

optimum production will require more extensive application of the best engineering practices, further development and acceptance by the regulatory bodies and the industry of standards of equity not only within a field, but also between fields, and patience with slow evolution in an industry which for 50 years was one of unbridled competition and which has been thinking of conservation for only about 10 years.

"It is quite probable that proration has already made the price of gasoline lower than it otherwise would have been, through increasing the yield of crude from the existing oil fields," he testified.

The correct price of crude, he said, is that sufficiently high to bring out a supply adequate to satisfy the demand and at the same time stimulate the discovery of new fields to a point where the optimum rate of production will balance market demand.

"There are some directions in which the proration process might be substantially improved," he admitted. "For one thing, more attention must be given to the proper spacing of wells to get optimum production in each field with minimum drilling expenditure. At the same time, it is also important to insist on higher standards of administrative procedure on the part of the regulatory commissions in order to stamp out the pernicious practice of granting special favors and exceptions.

"In general, state conservation and proration is a sound concept. Although there are valid grounds for criticizing many of the actions of the state commissions, I want to emphasize the fact that notable progress toward conservation has been made under this system."

Better Proration Needed

In the more extended analysis of the various factors in his brief, Farish declared that "the practical situation is that the petroleum industry is in a period of transition and that, despite serious doubts as to the value of some of the things done in the name of proration, it does no good to look for short roads to perfection. The better approach to the problems of the oil industry is to seek improvement of the existing proration procedure and mechanisms and the existing standards of performance and equity, and for all parties concerned to seek a better understanding of the whole problem along broad lines of industrial statesmanship in contrast with narrow lines of temporary, sectional or merely selfish interest.

"Progress in this better approach will have to be made by seeking out and taking the next logical steps, rather than by trying to reform the whole procedure from new angles."

Along these lines, he suggested:

More attention to the development and enforcement of suitable drilling patterns for each field;

More attention to the determination of allowables based on the optimum rate of production for the field, with necessary consideration to the oil in place rather than to the individual wells;

More attention to the determination of supply for a state on the basis of the optimum production of that state as established by the aggregate optimum production of the individual fields;

Continued efforts on the part of the Oil Compact states to get other oil producing states into the Compact group, and to improve their own conservation laws;

Further development on the part of the

[*See Farish, Page 44*]

Hits at uncertainty of federal government policies and any drastic interruption of established business relations, in denying, before monopoly probers, charges oil industry controlled by monopolistic group of 20 companies who frequently use unfair practices.

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W. S. Farish (left) president of Standard Oil Company of New Jersey, and Edwin S. Hall, senior counsel for the company, pictured as they appeared before the monopoly committee.

—International News Photo.

Barco No Longer a Legend

$18,000,000 Pipe Line Opens Flow-Valves on Vast Reserve

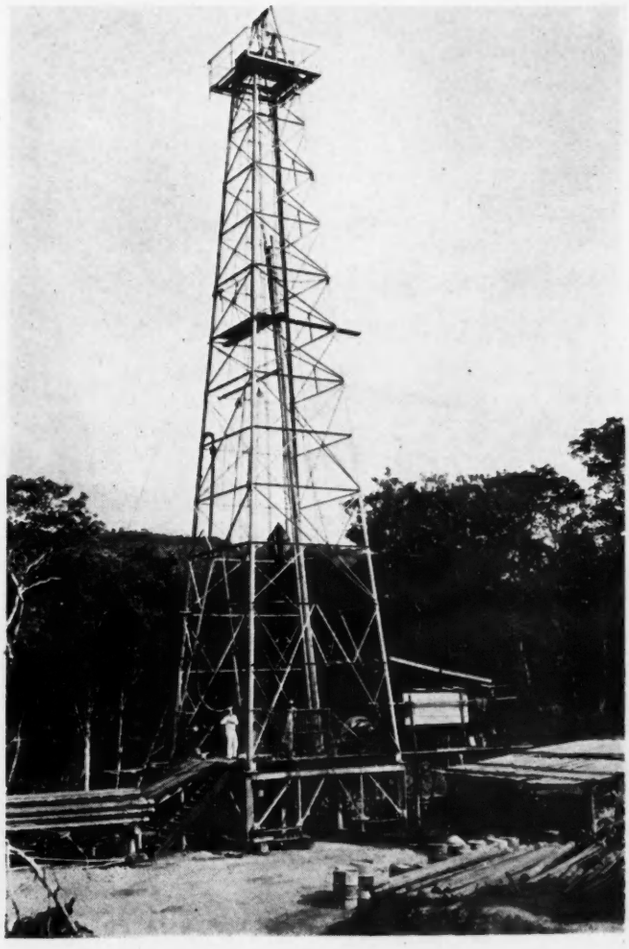
PIPE LINE ENGINEERING'S greatest accomplishment of 1939 was completion of South American Gulf Oil Company's 263-mile, 12-inch line from the Barco concession in eastern Colombia to Caribbean tidewater at Covenas on the west coast. (See The OIL WEEKLY, page 12, October 23, 1939.)

Realization of the project involved politics, history making floods, fights against Indians, and the hazards of air, virgin jungle, pestilence, and untrod mountain heights.

The line represented an $18,000,000 ante to a $22,000,000 pot spent by Colombian Petroleum Company in development of 25,000 plus barrels of daily production on the 988,000-acre concession. It will be the means of lifting Colombia several notches higher in international oil mart prestige, immediately allowing it to increase daily production from 61,507 barrels, the average of 1938, to 86,507 barrels. A designed capacity of 70,000 barrels daily may presage even greater importance of Colombia as a competitor in the European and Eastern South America markets.

Socony-Vacuum Oil Company and The Texas Corporation are joint owners of the projects.

Pioneering work to find Barco oil for the line called for construction of this type of stockaded geological reconnaissance camp close to the Venezulean frontier. The highest structure in the center is a watch tower, built as a protective measure against surprise attacks by hostile Motilones, an Indian tribe which took a toll of eight lives from the workers. The weapons used, bows and barbed arrows from four to six feet long.



Early work indicated necessity of building and equipping 40 kilometers of railroad within the concession and keeping the jungle from reclaiming the right-of-way.

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Modern rotaries of latest design had to be barged into the Colombian Petroleum Company's giant holding at a cost per ton that made their delivered price seem more like that of gold or silver than of iron and steel. The rig is on location at Petrolea 86.

Construction hazards such as that above caused fainter hearts to falter. The picture was taken just east of Tarra pump station at the end of a 74-kilometer section of jagged ups and downs from Petrolea tank farm.

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More than 633 kilometers of highway had to be cut and blasted through jungle and swamp and over mountain in furtherance of the $40,000,000 project. Grass will have to be cultivated alongside most of it to prevent the jungle from swallowing it as it has so many intruders of the past.

Structural steel members and concrete for many of the bridges such as the above crossing Tarra River had to be flown in by planes which carried more than 11,000,000 pounds of materials for use on the line. Still—company officials cling to the opinion of an eventual payout and profit on the job.

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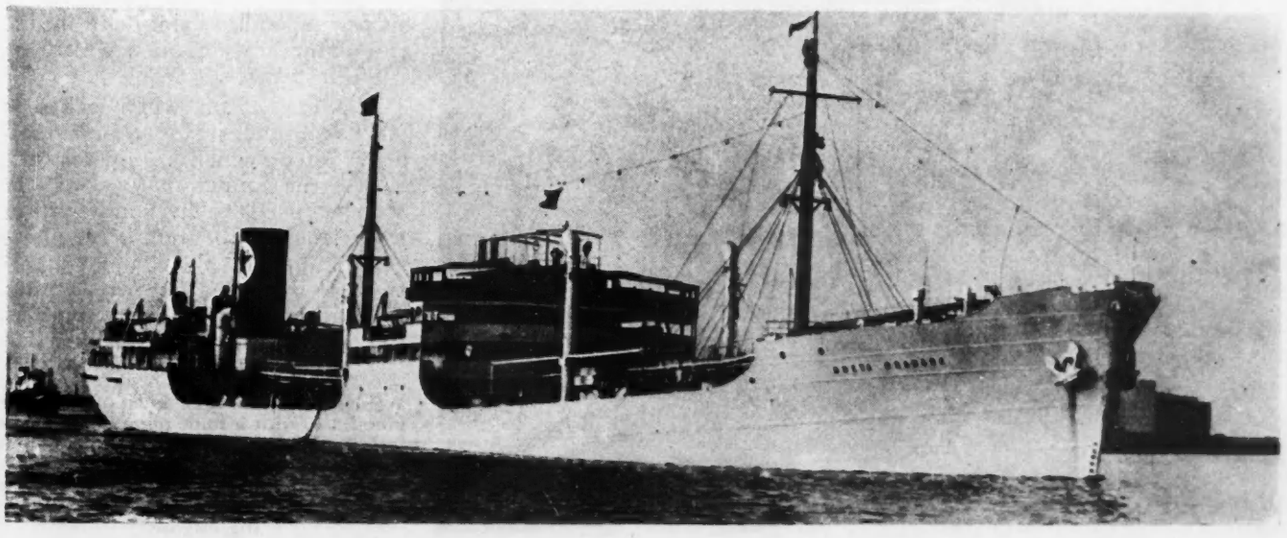
This shot of lowering a section of the line near Papayal, below, shows that when the boys were not climbing or jumping down they were cutting. Sagoc's bill for axes and machetes is something the management probably does not like to discuss.

Gravitating down to tidewater at Covenas from 5286-foot Rieber Pass, near which the above picture was taken, Barco oil may literally flow into markets of the world. The pass was named after T. (Torkild) Rieber, salty Nordic helmsman of The Texas Corporation and the guiding, driving spirit behind development of the giant Barco concession and construction of the line through the wilderness.

The Nuevo Granada, below, accompanied by one of Socony-Vacuum Oil Company's tankers, was scheduled to be waiting at Covenas late in October to carry the first Barco oil from the shores of Colombia.



Pumping Series Article No. 26

Theft-Proofing Pumping Equipment

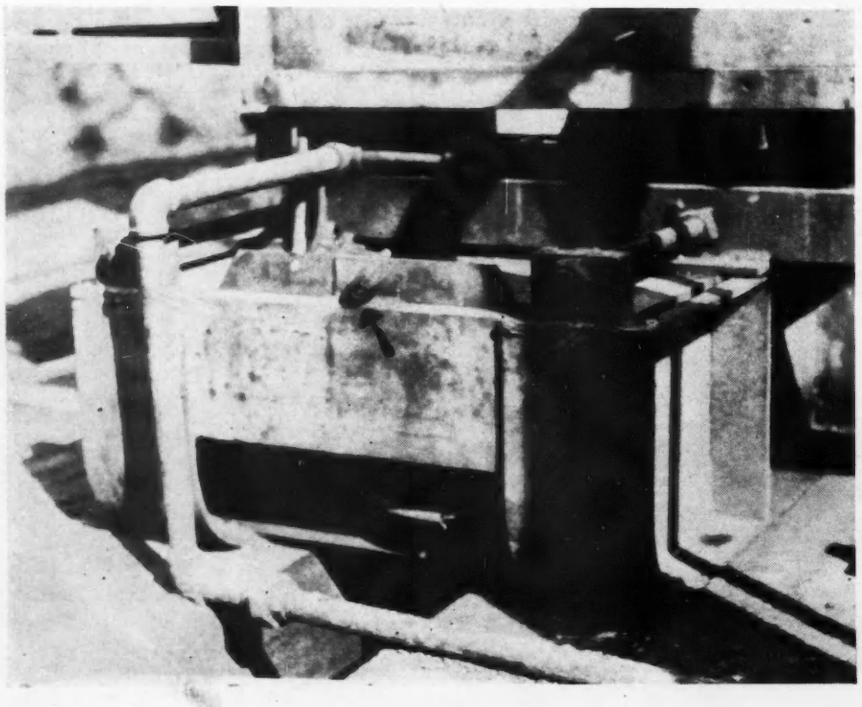
ISOLATED leases, especially when lying in wooded or rolling country such as characterizes much of the East Texas terrain, frequently suffer loss of production through pilferage; the stealing of some readily portable and easily removed portion of the pumping equipment which can be junked and sold for a fraction of its replacement value. Since spare parts at lease headquarters or in the company's tool house are stocked in proportion to anticipated failure in operation, rather than with regard to portability or pawnability, such petty theft often means the loss of a day's production while replacements are obtained.

Engine parts, such as spark plugs, carburetors and other accessories, can be protected by using a heavy hood or cover, with provision for fastening same with padlock and chain. But batteries, V-belts, and other parts which are not too readily identified as being a part of some particular type of pumping equipment, must also be safeguarded.

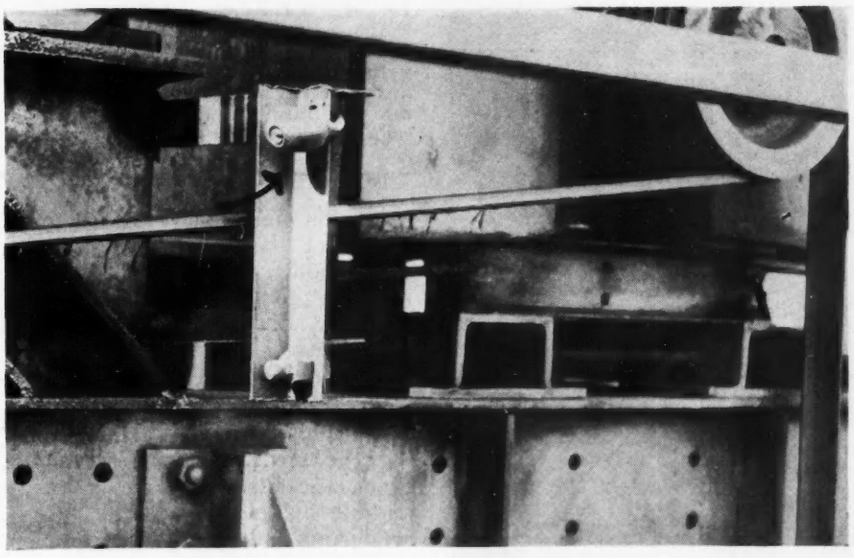
One company has found the installation of a heavy welded box between the ends of the skids serving as engine support the best kind of battery insurance. This box, welded solidly to the skids, is equipped with a steel lid or cover, long enough to project back under the first transverse member of the engine base, and with an angle edge which fits closely against a similar piece welded across the skid ends. Matching slots cut through both these angles provide a place through which a padlock may be thrust, effectively locking the battery within its container. By lining this box with rubber on the skid sides and top, and allowing clearance of three inches or so around the battery case, the corrosive effect of fumes from the battery is practically nullified, the gases liberated finding their way into the air around the loosely-fitting lid.

Since V-belts also seem especially attractive to thieves, this same company bolts a short section of heavy angle iron to the projecting end of a brace on its pumping unit platform, using a heavy bolt and welding the nut to the threads of the bolt after tightening sufficiently to prevent rattling, but not too tightly to prevent hinging or raising of the angle iron when desired. The lower end of this angle iron is slotted to take one of the company's standard padlocks, a similar opening being cut in the end of the brace against which the angle iron rests.

This angle iron, when locked in place, completes a hoop or ring of heavy steel which completely encloses the upper halves of the V-belts used to transmit power from engine to pump reduction gear. When in place, it is impossible to remove the belts intact, even if taken from both pulleys. Yet, with the pivotted locking bar,



Welded between the skids of this engine base, with a tank plate cover interlocking with skid on one end and padlocked on the other, this box affords 100 per cent protection to the starting and ignition battery on this tank pumping engine.



This padlocked bar, tying across one side of the V-belt drive on a pump power plant, effectively prevents pilfering of the belts and possible shutdowns for replacements.

it is easy to remove or replace belts for anyone equipped with the proper key for manipulating the padlock.

Installation of padlocks in places such as those cited call for but slight additional outlay, but can easily save many times their cost in safeguarded equipment and insured production on schedule.

Pilfering of small parts, easily transported and readily "pawned" through unscrupulous dealers in second-hand parts causes most of the loss through delayed production, the actual dollar value of the parts stolen being secondary. But, with scrap iron prices mounting, and ready markets in far-flung fields for "salvaged" pumping equipment, the producer must also guard against theft of his entire pumping unit.

There is one lease in a heavily wooded, creek bottom section which has lost two complete pumping units, and had the engine stolen from the third. These units, being designed for moderate depths, are in all probability now working on some not to inquisitive producer's lease somewhere far from their original setting — with little hope of being traced save possibly through eventual orders for replacement parts.

In common with most oil field equipment, no provision was made for theft-retardation. It being impossible, practically, to fasten a unit beyond all possibility of eventual removal. Since the third visitation to its property, however, this producer has experimented with a number of methods for securing his "movable" units, with apparent success.

The units, built up on the conventional channel iron skids, are riveted together, instead of being assembled in the usual manner with bolts. These rivets, besides being highly resistant to the usual oil-field thief's equipment of a pair of pipe wrenches and a winch truck, also mark the assembly apart from the usual run of pumping units, and thus makes them "hot" for the usual fence or shady second-hand equipment dealer to handle.

To permit adjustment of V-belt drive between gas engine and reduction gear, a belt tightener is included in the set-up; this arrangement eliminating the need for adjustable engine base, normally included in the layout.

Another producer, suffering severely at the hands of oil-field thieves, hit upon the plan of having the welder go over a unit after it was set, adjusted and in running order. Each nut was tack welded to the top of the bolt on which it was used, locknuts being used in all instances, and the welding confined to the half nuts used for this purpose. This permitted possible cutting out of the weld for eventual tightening of the bolt should such a course be necessary.

The units so protected had been in operation but a short time when one came up missing. The "salvage crew" had simply put pipe wrenches with long "swamp sticks" on these welded nuts, pulling against them until the bolts broke and permitted the unit to be lifted free of the stubs remaining. In this instance the foundation bolts were attacked, and under strain broke off below the top of the concrete, requiring an additional delay while new holes were drilled into the concrete to take new bolts—this time of high-alloy steel.

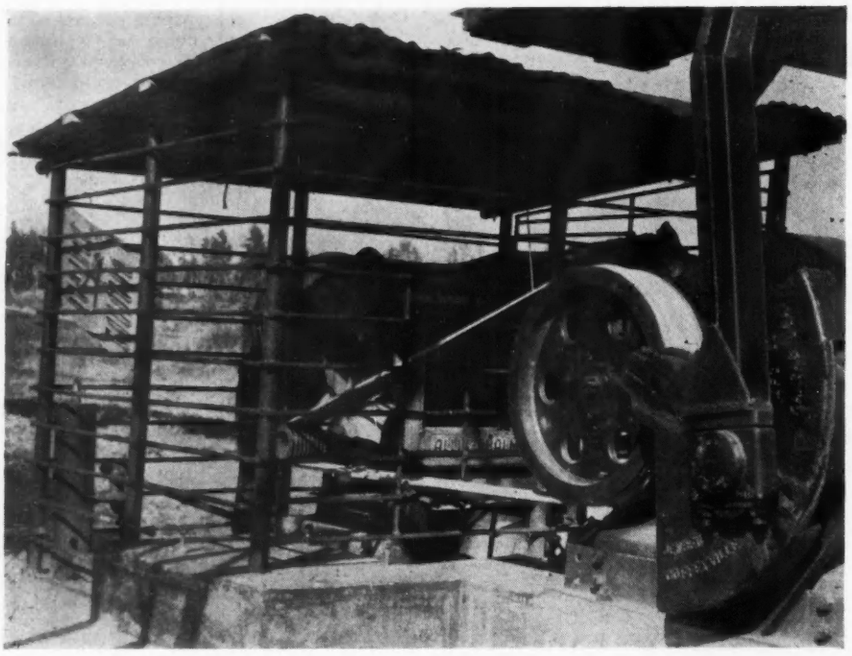
When replacing the unit, rivets were used to make a single unit of channel iron base, reduction gear and engine base, only the foundation bolts still being threaded and carrying the conventional fastening. Over these bolt ends, double nutted for security against possible loosening by vibration while running, caps made up from four-inch extra heavy pipe were placed, the caps being formed into an orange-peel cover which completely enclosed bolt end and nuts. This cover was welded all around to the channel frame, requiring the service of a welder before the cover could again be removed and the bolts gotten at. So far, although strange truck tracks have been noted at the well site on two occasions since the first robbery, the unit has been unmolested.

Another lease, suffering from theft, reworks all pumping units to use either 1- or 1¼-inch bolts for all fastenings, equipping these with pentagonal nuts instead of the usual four- or -sixsided ones. These five-sided nuts can be turned by a pipe wrench, but offer no purchase for the usual open end or socket wrench, even the so-called "double-hex" wrenches slipping over the corners of any nut over which they can be forced.

To protect these special fastenings short stubs of extra heavy pipe, just large enough to admit the special sockets made up to fit the pentagonal nuts, are welded to the unit bases. These sockets, welded in place after the unit is positioned, permit tightening of bolts at critical points during the normal pumping life of the unit, but effectively block the oil-field thief unless he is equipped with a torch—in which case no mechanical safeguard can stop him.

Against the thief with the torch the method of grouting all equipment solidly into the concrete base is the only remedy, and is one which serves when the thief is interested only in securing the unit intact for future resale in other fields.

If the pumping unit be built up of welded sections, and can not be dismantled wholly or in part without cutting these welded junctions,



This sucker-rod cage completely encloses the power end of this pumping unit, preventing pilferage of small parts as well as theft of the engine. The V-belts are protected by carrying one bar across the gap through which they operate, requiring a welder's aid in replacing belts.

provision of flanges, bevelled projections or other protuberances on the base of the unit enables the usual grouting operation to assure permanence of the unit—requiring dismantling of the concrete base, in fact, if the unit is to be moved. These dovetails, or "dogs" as they are dubbed by the field men, are welded to the bottom of the lower flange of I-beam or channel forming the base of the unit, and either fit into recesses left when pouring the original foundation, or require slightly higher setting than usual, with consequent thicker bed of grout to insure complete coverage.

No producer can hope to render his equipment 100 percent theft-proof without going to expenditure far beyond a reasonable figure, but by resorting to some method such as outlined he can make unauthorized removal of his equipment so hard that the thief, working by night and limited as to time and tools, will pass up the securely set units to try his luck at some other, not so solidly placed.

A further precaution against the oil-field thief lies in getting away from routine on switcher's and gauger's rounds. If the lease workers have a regular schedule for visiting a certain well, this round remaining unchanged from day to day or week to week, it is easy for the thief to learn this routine, and to time his visits so as to afford him maximum undisturbed time. If, however, rounds vary or are changed up frequently, there is greater likelihood of the lease worker's surprising the truck at its illicit work.

Use of the well-known "railroad commissioner's alarm" also serves to permit check-up on any unauthorized entry into the lease; this scheme being particularly effective when two or more entries into the lease are afforded, as when a highway passes through the property, with company-built laterals extending to the various well sites from this main roadway. The commissioner alarm, consists basically of a wooden bridge or culvert tying the company road into the highway, or a cattleguard of the usual pipe structure with one or more pipe ends purposely left unwelded.

With either type of alarm, crossing the structure by any vehicle gives the alarm which is easily audible at the switcher's shack—rendering it easy for the switcher to proceed to the area being trespassed upon, and to determine the cause of the noise at the bridge or guard. If the switcher or lease guard's approach be from within the lease, the mere appearance of his headlights on the scene is often sufficient to drive away the intruders. If this does not secure results, the lease man can continue out of the property, summoning help before tackling the thieves.

Many instances have been noted where the mere crossing of such a warning device has resulted in a quick-about face by the trespassers. The story being evident in the wheel tracks the next morning. This type of warning is especially effective in swampy or low-lying leases where the terrain prevents access to outlying units other than along established routes.

Grouted deeply, this pumping unit base would require practical demolition of the concrete before it could be moved. Usual foundation bolts were used solely to hold unit in place while being grouted, and might be removed without facilitating theft.

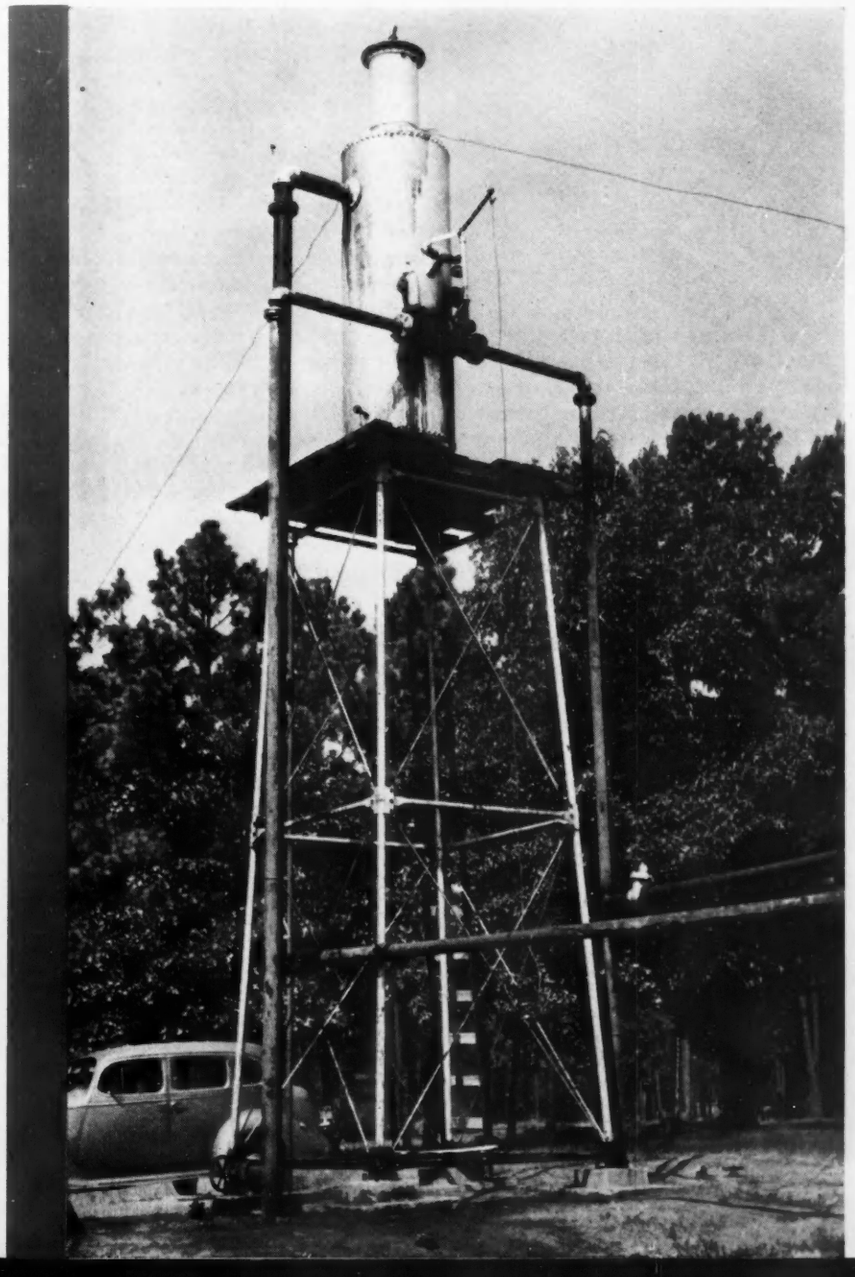
Two-Unit Treating System Minimizes Corrosion

BREAKING up "loose" emulsions such as characterize the mixture of crude and water on the west side of the East Texas field requires little more than the application of moderate heat, with time for the heavier salt water to settle out before the fluid is passed to lease stock tanks. It is in the maintenance of the desired temperature of the oil-water mixture that most trouble is encountered, and in which, in standardized treater installations, that the maximum of corrosion is encountered.

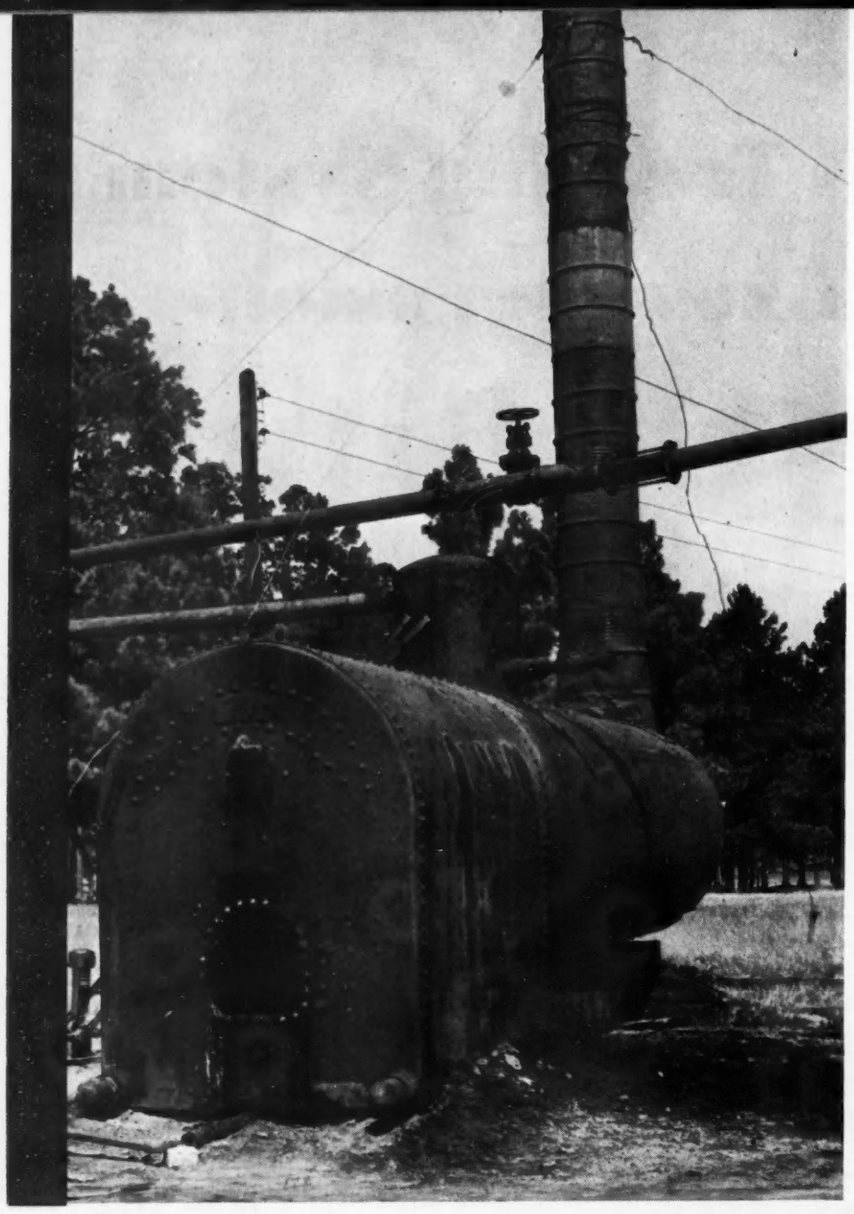
One producer departs widely from accepted apparatus and equipment in treating crude produced on his lease, finding the method worked out and system used giving excellent results and demanding a minimum of replacement or cleaning.

The flow from the well is diverted through a heater, which is nothing more or less than a drilling boiler, gas-fired, through which the emulsion is passed and brought to the desired temperature through regulation of flow and fire control. By operating with a small flame in the fire-box, carbonization of the oil in contact with the tube sheet and crown sheet is avoided, and serious gasification of the oil eliminated. From the heater the flow is through the usual inclined (and insulated) line to the settling tank. Since it is sometimes desirable to heat the flow before passing through the separator, dual leads are provided, with adequate valve control to permit the oil to be run through the boiler either before or after separation.

In addition to the usual flow line to the settling tank, this unit is equipped with two 4-inch connections, one about a foot above the tank bottom, the second near the mid seam. Lines from these two fittings are carried to what is designated on the lease as the "barbecue pit." A low brick structure some 10 feet in length and 4 feet high. Set into the lower part of this Dutch oven is a drum of 14-inch pipe, at one end of which is connected the line from the base of the settling tank. On a riser at the other end is tied in the line con-



Dual leads to separator hook-up permit well flow to be diverted through heating unit before or after passing separator baffles and control gas volume.



Retired drilling boiler serves as heater for bringing oil-water emulsion to desired temperature before being flowed to treating tank.

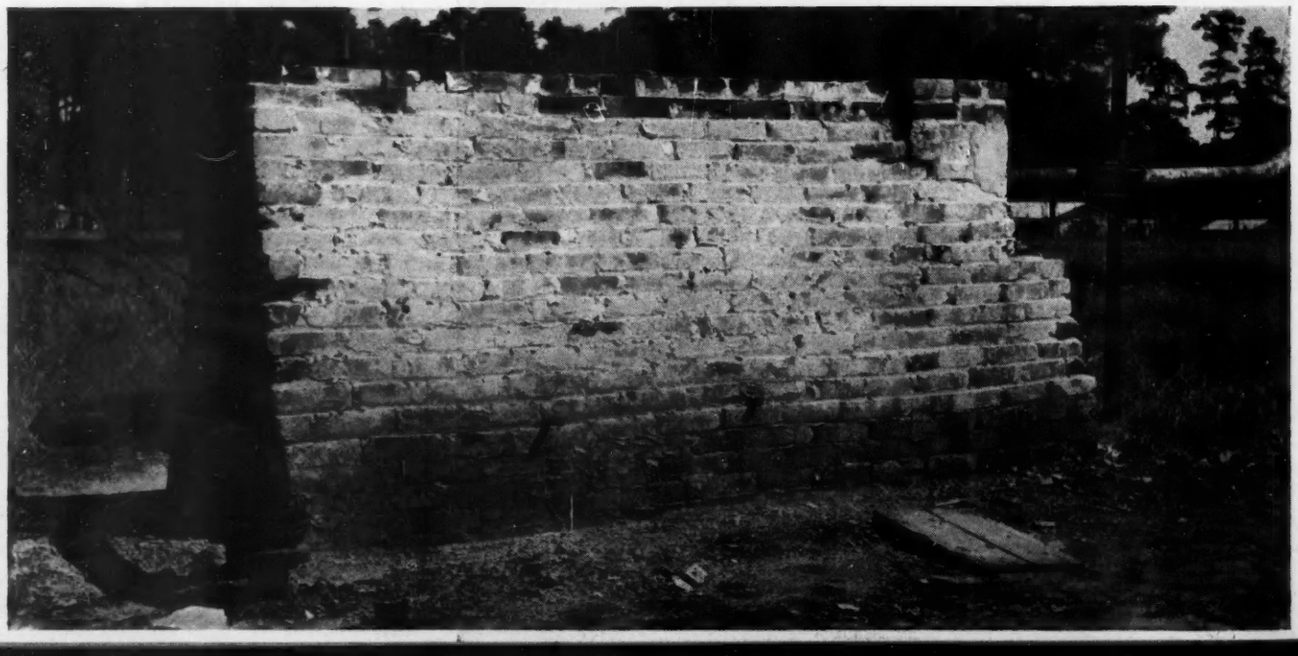
necting with the center line of the tank.

When the gas burner below the drum in the oven is lighted, the fluid in the drum—mainly salt water from the settling tank—is heated, and thermo-syphon flow established through the lower line and back through the sloped return line. By maintaining this flow at an even rate, a small fire in the oven will hold the desired temperature on the body of fluid in the treating tank, enabling the newly heated fluid from the boiler unit to remain at the desired temperature until all entrained water has settled out at optimum temperature for this to take place.

Use of the Dutch oven or "barbecue pit" enables a small flame to maintain treating tank temperature, with all flow of salt water through a relatively small amount of piping, with only the pipe and drum to be replaced in event of corrosion damage; as contrasted to the much greater heat expenditure required were the boiler required to maintain tank temperature as well as raise that of the incoming emulsion stream. When thus operated, only actual well flow must be handled through the boiler, and the amount of salt to which it is exposed thus maintained at the minimum.

Corrosion inside the boiler is held within narrow limits by close regulation of heat at that point. A check on this is obtained by occasional drainage at the blow-off connection, and by observation of the salt-glaze forming around minor leaks on the boiler front and at the tube sheet. The system has been in operation now for over two years, without serious corrosion having as yet been detected.

"Barbecue Pit" or Dutch oven, which serves to maintain desired temperature in body of liquid in treating tank with expenditure of minimum fuel. Circulation from heater to tank is maintained by thermo-syphon.



As We See It . . .

STATING THE CASE

THE Cole committee shortly will begin its hearings to determine the need, if any, of further regulation of the oil industry by the federal government. Representative William P. Cole, Jr., chairman of the committee, will be on familiar ground. He intimated, when Congress gave him its dictate that another investigation is in order, that the inquiry he so thoroughly conducted five years ago still stands. The committee's report then ended as a report, and so far as the record since has shown, there is no change in the fundamentals of the situation since that time, although there have been many incidental mutations. Current hearings before the Economic Committee have revealed nothing new. The Federal Trade Commission has investigated oil so frequently that its files are more voluminous than the industry's own. All this would indicate leaving well enough alone. But there are those without and within the industry who persist that there is need for federal control. There is no agreement on the definition of control, so the burden of further investigations must be borne in the hope by its advocates that control may be both defined and proven desirable.

CONTROL, as Webster gives it, ranges from restraint to destruction. Under a federal bureau (removed from electoral supervision as in the states) it can and will be made to mean dictation.

Restraint of the freedom of action and property rights of individuals, not to mention so large a group as is represented in the oil industry, is a serious matter in this country. But if the common welfare demands it, such action would be justified and equitable under our ideas of democratic freedom. It is in order, then, to consider whether or not this industry is so fulfilling its obligations to society that freedom in working out its own destiny is justified.

Has the industry demonstrated its ability to provide adequate supply of petroleum products to meet the public's requirements, and to provide for the national defense?

That current supply is ample is too obvious. Known reserves are ample in the estimation of all except extreme alarmists, and each year adds more to this known reserve as the science of finding and technique of recovering oil advances. To the accumulation of actual crude oil reserves, yearly additions to supply are made through advances in efficiency of converting crude to wanted products. No one claims that the supply is inexhaustible, but including shales and other known sources of fuel, the end of supply is put so far in the future that people of another epoch can face that problem.

Are prices fair and equitable to the public and to the industry?

The first part of this question is answered quickly. Gasoline cost has declined a third since 1923, and other products in proportion. This without tax, and even with the tax added, gasoline is cheaper—and better. Whether the price is fair to the oil industry is a moot question—but the industry makes its price, a privilege that will be of benefit to the public if it is retained. Earnings for stockholders are not high, but the industry does get enough in its transactions to pay its million workers a higher-than-average wage

Is there dissipation of an important natural resource, or wasteful practices in the production, manufacture or distribution of this resource?

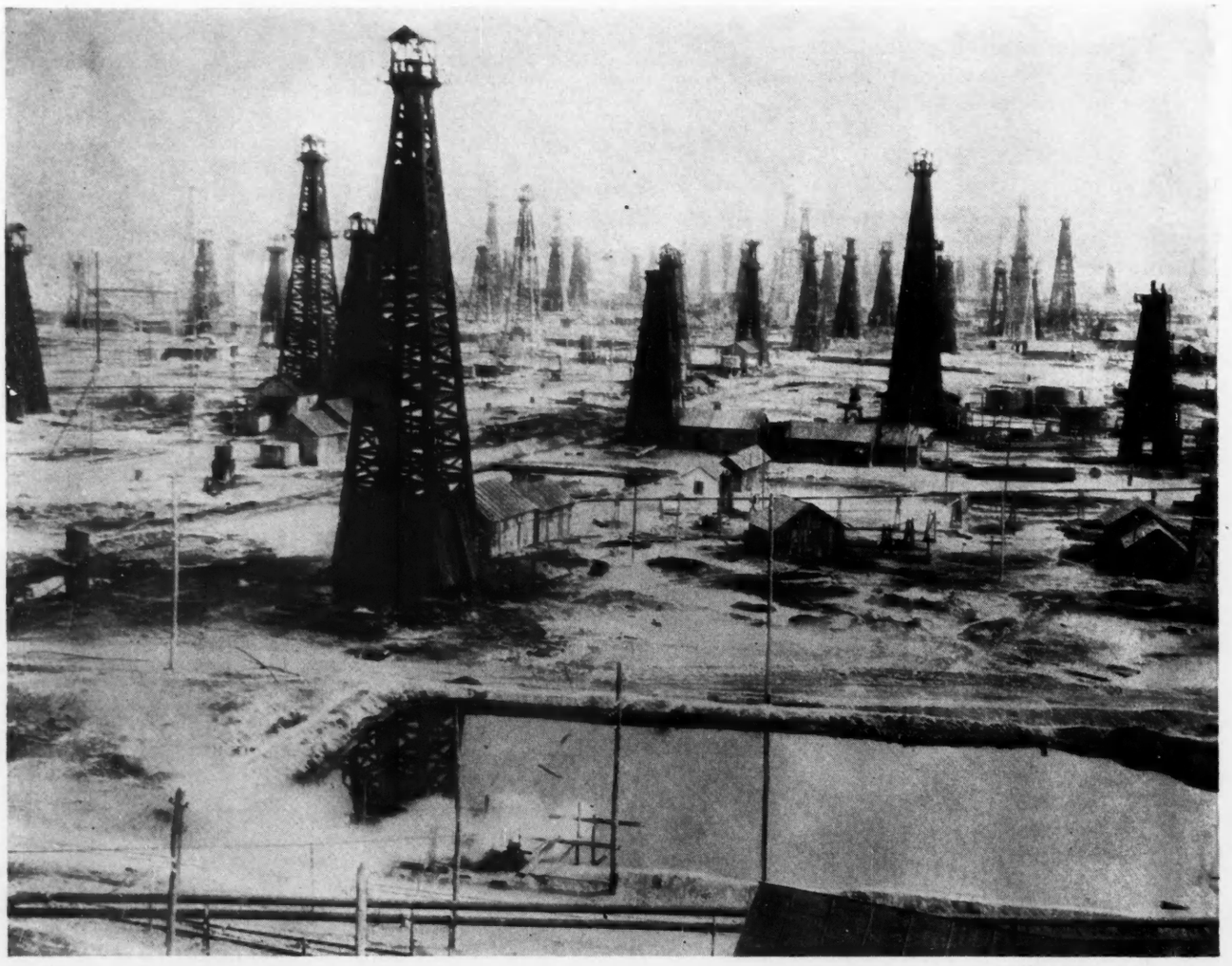
Waste in production has not been reduced to the irreducible minimum, but the progress of engineer-

ing toward that goal cannot be accelerated by any change in governmental control. Some waste of gas is inevitable, but use of its energy in lifting oil to the surface is as economic as is its use for other power purposes, and perhaps not so wasteful as in some other applications. In manufacture, advancements have been made in complete utilization to offset a large part of the necessary waste in production. In distribution, losses are remarkably small, considering how volatile is this product.

LOW prices are conducive to some dissipation in use. The public demands the convenience of high-powered engines and the comforts of oil fuel. Government has done a full share of discouraging this use by imposition of taxes. Perhaps advocates of control as a conservation measure have in mind that their aim may be attained by restriction of consumption by prohibitive prices, but it is certainly no function of government to retard the people's "pursuit of happiness" unless more need for it than is now apparent is shown.

Are there economic forces at work within or without the industry that may jeopardize the future supply of petroleum products at a reasonable price?

Advance of efficiency and economy has been uniform throughout the history of the oil industry. It has grown big on a volume basis. It has been shown during repeated investigations, including the one now underway, that competition is keen. In fact the plaint of those who most vociferously contend that there is monopoly arises from the fact that economies of the efficient large units are passed on to the consumer. Obviously this is hard on the less efficient, but it is just as obvious that the public will not be served by tempering of the wind to comfort this small minority. Enough small operators are prospering in all branches to indicate that competition is fair. So long as competition is keen and fair, the public is assured of an equitable price.—J.K.R.



International News Photo

The most important source of petroleum in Europe not controlled by nations at war or aligned through treaties is that of Roumania, and therefore this country's oil is muchly coveted. A general view of the Roumanian Prahova Valley fields is shown here.

Proper Meter Maintenance Calls for Special Technique

By FRANK B. TAYLOR, Staff Writer

OF primary importance in fluid meter maintenance is recognition of the fact that the meter is a mechanical device and that its ability to measure correctly depends largely on its mechanical condition.

As with all other mechanical instruments, the fluid meter is subject to wear and to the influence of elements it contacts, such as the fluid it measures.

It is questionable if there are more serious problems confronting accurate metering in any industry than those facing the petroleum engineer.

In the first place, practically all crudes have highly variable volumes of entrained gas. The fluid is not stable, it frequently varies in temperature and may be highly corrosive. Paraffin within the crude may come out of solution and build up such a resistance within the meter that it cannot operate. Varying viscosities require corrective factors. Sand and other abrasive materials carried with the crude injure working surfaces in a mechanical sense and render the meter inaccurate by increasing clearances.

Generally speaking the pipe line department problems of metering are not as complex as those confronting the producing division as the crude handled in the former is more stable, not subject to such agitation and usually carries less abrasive matter. Pressure is not a great problem as a release by-pass is usually installed, and where exceptionally high pressures are required it is only necessary to strengthen the meter housing. Corrective factors in high pressure measurement become more involved than those in lower pressure measurement.

Mechanically there is a great difference between the three general classifications of meters. Functions of maintenance correspondingly vary.

Testing for accuracy is a service designed to keep recorded volumetric measurement in line with actual volumetric passage through the meter.

Accuracy of measurement of either fluids or gases does not depend necessarily upon mechanical conditions wholly. Neither does mechanical efficiency guarantee accurate measurement. Good mechanical condition does assure both continuous and satisfactory measurement once the volumetric accuracy is established, and for this reason a fundamental requirement of any measure device is mechanical dependability.

In this article any angle of service that has no direct bearing on mechanical condition is considered a service rather than a maintenance problem.

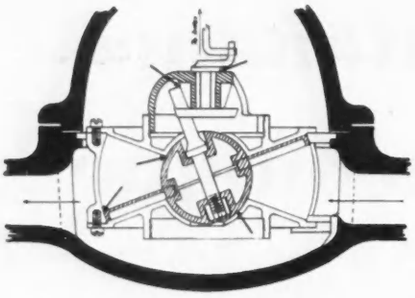
Mechanical problems involved in measuring fluid volumes have been solved by a number of means, a situation which has developed radically different types of instruments. Without going into variations of design, these can be listed as follows: disc type; current type; piston type; rotary type; and the orifice type. Each type has been found to satisfy some or many of the requirements of the petroleum industry.

As the meter is a mechanical device, the first place to check for meter imperfection is at any bearing or contact surface. Play in bearings may or may not result in inaccuracies, depending upon the influence the bearing play has upon the volume of the measuring chamber. Bearings that are too free are quick to gather sediment or suspended matter, thus hastening wear. Tight bearings cause excessive friction, either increasing the pressure differential at which the meter will function or causing immediate wear. In judging correct freedom of working parts it is best to follow manufacturers' recommendations.

Frequent meter inspection greatest insurance for accurate measurement and low maintenance cost

In the disc type meter, fluid is measured when it flexes a circular disc to drive it around a control head. Each complete rotation of the disc accounts for a gauged displacement, and this is recorded on a conventional index. In this instrument there are two points of contact which must be kept seated accurately. These are the spherical bearings holding the disc and the control head upon which the disc pinion rides. Excessive wear at either of these points produces inaccurate measurement through too much play, or by-passing of part of the fluid volume.

Also in the piston type meter are two points of wear that must be kept in order. One of these is the piston stop. The reduction of this by constant friction allows the travel of the piston to exceed its normal stroke length, thus increas-



Fluid entering the meter causes the disc, mounted on the sphere, to rotate. This in turn drives the mechanism controlling the index. Points to watch for possible wear indicated by arrows.

ing the displaced volume to give a flow reading proportionally lower than actual. The other point to watch is the connecting rod take-off to the index drive. Sliding valves must seat properly, or be ground in or replaced if they are not seating. Any points of contact in this or any meter must remain free yet present an effective seal to the fluid being measured.

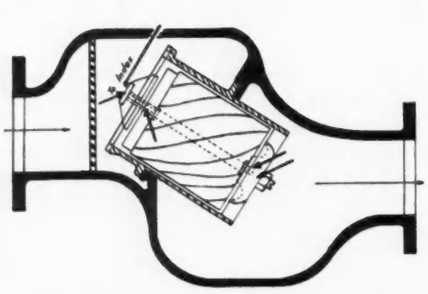
Current Type

The current type of meter does not record the actual volume of fluid displaced through manipulation of a moving part. Instead, the flow is directed against blades set into a revolving rotor, which rotates in proportion to the energy of the flow and consequently to the volume of the flow. Recording is by index driven from the rotating part. In this device, many of which are very finely balanced, it is necessary to keep friction at a minimum. Packing around the index drive must not be allowed to bind. Also, if the rotor is designed and seated to function in a certain position, it is best to install the meter as recommended so that the mechanism will retain its balance and wear will be normal.

In the rotary type of meter the measuring chamber revolves, discharging a measured volume of fluid on the downstream side of the meter. As with other meters, there are a number of variations of the principle. Fluid flow drives the rotary mechanism, the index being driven from some point on the rotor. Here again, the points of contact suffer the most from wear and present the maintenance problem. Sliding contacts must seal off any by-pass and yet be free to operate at a minimum pressure head. Bearings fixing the rotating parts must keep it from wobbling or undue flexing.

Orifice Meters

Orifice meter measurement of fluids presents the same or similar problems encountered in the measurement of gas by the orifice method, and this is explained in detail in other paragraphs. In using the orifice meter with fluid measurement, the pressure connection is dispensed with, only the pressure differential existing across the orifice plate being recorded. When used with fluids, the meter and manifold are hung beneath the line to eliminate any lock due to vapor in the fluid stream. As the function of the orifice meter depends for its accuracy upon a constant orifice



The current type meter is driven by fluid striking vanes set into a rotor. The index is a count of the revolutions. Points of wear indicated by arrows.

size, this must be checked frequently where fluids are being passed that could enlarge the orifice or dull its edges.

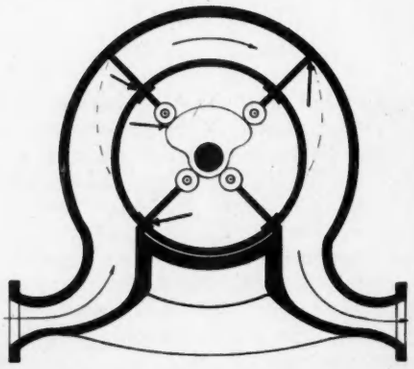
Watch By-Pass Points

In any fluid meter an important point to watch is that at which a by-pass directly from the intake side to the discharge side might result from wear. This may involve a spindle, or bearings, or sliding contacts. Besides causing inaccurate measurement, the play allows a settling place for abrasives that can further damage the instrument. A key to meter condition is often found in the pressure it takes to operate the device, or in the differential pressure of the meter installation. A meter that should operate at a minimum stipulated pressure or head but requires considerably more than this pressure evidently is in ill-repair and should be closely inspected. Where a meter is in operation in a setting and it is found that the differential pressure, or the difference between the inlet and outlet pressure, is excessive, there are two alternative causes. The most usual of these is that sediment carried in the fluid stream has so clogged the screen protecting the inlet side of the meter that a noticeable restriction to flow is built up. However, it may be found that undue pressure still exists after the screen is cleaned, and in this case it is usual that the difficulty is within the meter itself.

Measurement of petroleum fluids is a difficult task, requiring special knowledge, technique and equipment.

"The measurement of crude oil is not comparable to the measurement of gas, water or electricity," a statement by William G. Heltzel, Stanolind Pipe Line Company, made before the Petroleum Fluid Metering Conference at Norman, Oklahoma, concisely set apart the application of metering to the petroleum industry as having new and varied problems.

In other lines of measurement, it is desirable to determine a satisfactory maintenance program, and to hold to it. This can not be done in the oil game, no matter how successful such a policy may be in other industries. Meters in other uses measure a relatively constant force of flow, but the oil meter functions on a flow that has practically no uniformity. Other types of meters can be lubricated, bearing for bearing. On the other hand, the measuring parts of the oil meter must depend entirely upon the lubricating qualities of the fluid measured, and if such quality is lacking, then the meter fails to receive lubrication. Only the stuffing



The rotary type fluid meter measures gas in a sealed chamber, discharging it when the moving chamber passes into the outlet side of its revolution. Points to watch for wear are indicated by arrows.

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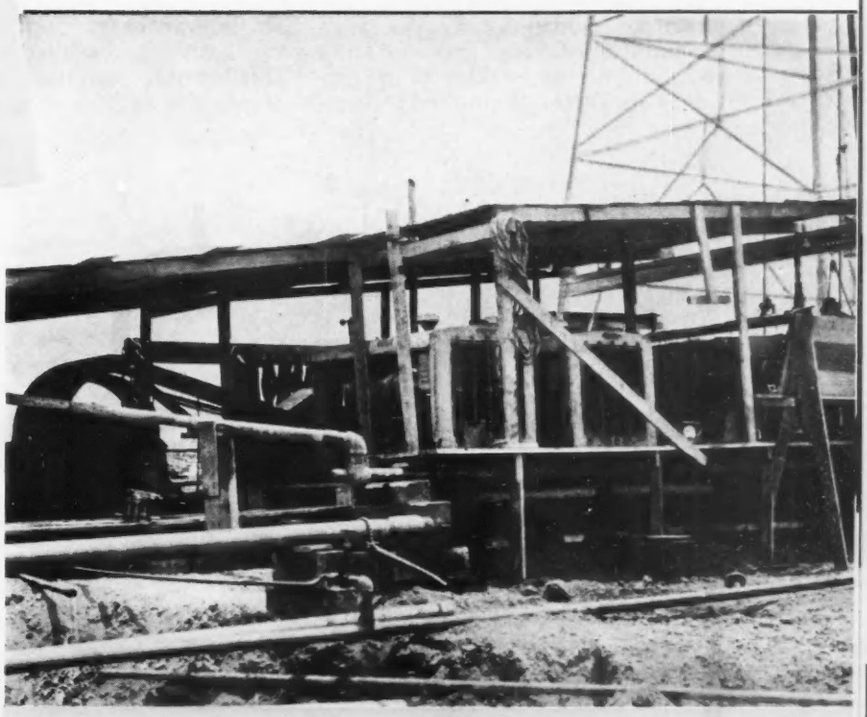

ELEVEN WELLS, ranging from three to four thousand feet, are the record, so far, of these two D17000 "Caterpillar" Diesel Engines. Through compound drive they power a Bridgeport rig and a 7¼ x 18 mud pump.

Drilling contractors (like Taber and Coleman, who own this rig) are shrewd buyers of power; and when so many nowadays are selecting "Caterpillar" Diesel Engines, you can be sure there's more behind their choice than just talk. They demand proof that these engines can drill more hole in less time and at lower over-all cost . . . to give them more jobs to handle and easier profits. And "Caterpillar" Diesel Engines are doing just that—in thousands of oil-field installations they are proving their economy; their speed; their dependability; their stamina and sturdiness to keep going, day and night, month after month without long or frequent shutdown for maintenance, servicing or repairs. (And when, ultimately, these rugged power plants do need service or parts replacements, the most complete, efficient and convenient facilities of their kind are quickly available.)

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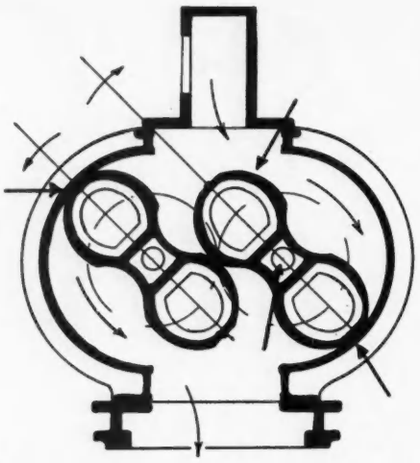
boxes and the index which records the volumes passed are externally lubricated.

Corrosion problems may be present as well as those of abrasion, and as the meter presents a mechanical problem, it is subject to mechanical ills in proportion to its use. Therefore, it is not practical to stipulate an exact maintenance program, but it is practical to base such a program on the service to which the meter is put.

Gas Meters

Testing for accuracy and adjusting accordingly are not assumed here to be actual maintenance, provided that the mechanical condition is satisfactory for measurement. Any strict program of attention will necessarily include servicing and checking meters that require no mechanical change or adjustment, and this work is more accurately charged to operation than to maintenance. Routine tests and inspection frequently bring to light mechanical problems that require attention, and these are correctly charged to maintenance.

The positive displacement gas meter of conventional type is a mechanical device incorporating two diaphragms working in opposition. Gas enters the meter and expands or fills a flexible diaphragm, centered with a thin, metallic plate. The exact volume of gas which can expand the diaphragm is controlled by the position of the diaphragm during filling. When the diaphragm reaches an exact position it automatically closes the inlet valve. During this function, the second diaphragm is reversing the action, exhausting its gas through the downstream port, so that the action of the meter is continuous.



The rotary displacement gas meter reverses the action of commercial blowers, and measures gas accurately through rotation of two contacting impellers. Energy is furnished by the gas flow, the measuring chamber remaining constant and unvaried through each complete revolution.

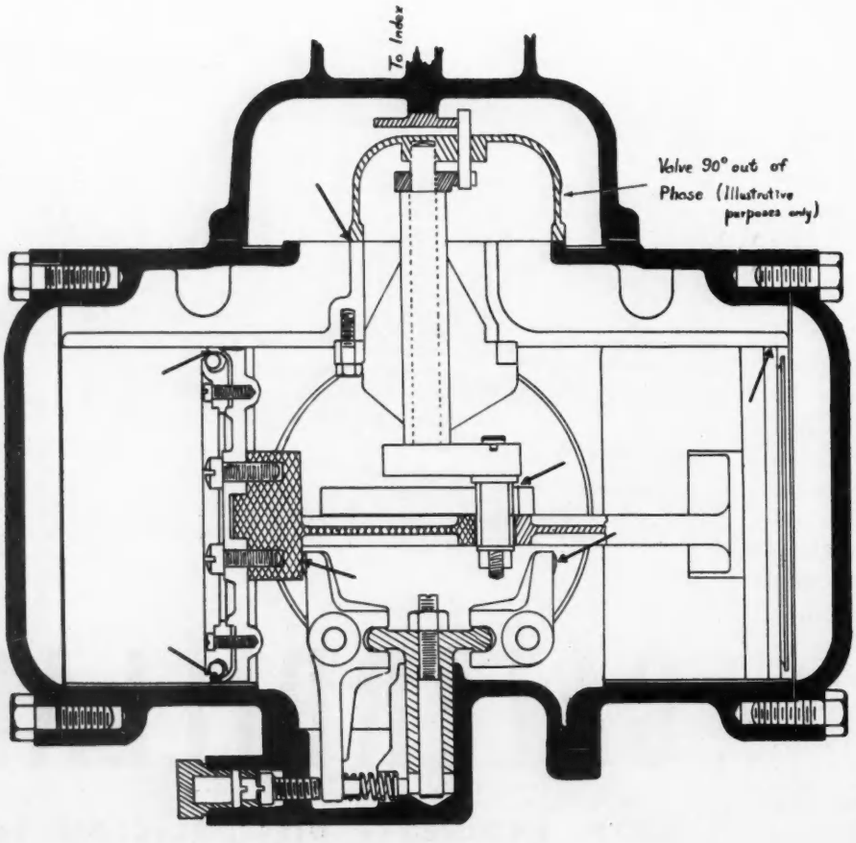
This means of displacement measurement calls for an arrangement of light metal or composition sliding valves, arm controls and adjustments, flexible diaphragms that are usually of leather, an index to record the volume of passing gas, and a case to contain the parts and to serve as inlet and outlet chambers. These parts and the numerous connections required in their operation must be in proper mechanical condition, otherwise no testing or adjustment will make the meter operate accurately.

It would be most difficult to explain on paper the tension which should be present in the connecting links and other moving parts of a meter. It would be equally difficult for a meter man to put a bad meter in satisfactory condition without tools especially designed for that purpose. An experienced meter man can often determine exactly what is causing trouble in a poorly operating meter, or at least he can judge where to look first for the trouble merely by observing the action of the meter while in opera-

Open or Exhaust Slowly

Of first importance in taking a meter out of service for repairs is the manner in which the instrument is emptied of line pressure. Positive displacement meters operate under line pressures ranging from a few ounces to 250 pounds per square inch. However, the pressure drop across the meter, or the differential between inlet and outlet, should not exceed more than a mere two inches of water. Increasing this factor can easily cause the meter to operate at a speed too high for safety, with the result that the meter is seriously damaged. When either loading a meter or taking it out of service the gas should be fed slowly into the instrument, or very slowly exhausted. Remember, the abrupt opening of a valve controlling a gas pressure can exert a force on a meter far in excess of operating requirements.

Considering one of the most important maintenance items first,



The piston type meter reverses the action of a pump in that the fluid drives the instrument. Piston displacement affords the constant volume necessary to accurate measurement. Points of maintenance indicated by arrows.

PERFORMANCE AND LOW COST give Steam Rigs a beating

April 1938, Wiegand Brothers, who formerly owned steam rigs, urchased a "Cardwell" Model R double drum draw works. Ten onths later they purchased another Model R. That's why we say epeat orders are the biggest proof that "Cardwell" rigs make money r their owners. Almost 70 per cent of our sales are repeat orders om satisfied customers.

ese are the reasons:

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e have four sizes and nine models of slim-hole rigs to fit any depth ell, all interchangeable for rotary or cable tool drilling, and modern the minute. We will gladly send you detailed information; or, if ore convenient, see our nearest representative.

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Cardwell Manufacturing Company, Inc.
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Gentlemen:

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During the month of April, 1938, we placed our first order for a Model RL "CARDWELL" Draw Works. Two weeks later it was on the job in Texas making hole. This rig has operated continuously since then, having drilled 18 wells along the "Balcones Fault" to an average depth of 2700 feet, or a total in excess of 48,000 feet.

The cost of maintenance and repairs to the rig during the course of these operations has been quite reasonable. In addition, a considerable saving has been effected in haulage and in rigging-up time due to the portability of the equipment.

The results experienced with the first "CARDWELL" unit induced us to order a second one, a Model R Double Drum Combination Draw Works, equipped with a 225 H.P. gas engine. This rig was tried out on a 4400 foot test in De Witt County, Texas, and we are happy to state that its performance met with our full expectations, particularly as this job called for considerable wire-line coring and swabbing.

Yours very truly,

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special treatment must be accorded the diaphragms. They must be pliable and soft, otherwise it is best to replace them. Condensed fluid in the meter may cause the leather of the diaphragm to become somewhat caked or hard near the bottom. Constant wear and contact with the gas stream may result in brittleness. A mere glance at a diaphragm is not sufficient to condemn it or to pass it as satisfactory. Kneading it between the fingers is a good test, if the meter man is experienced. This, considered in connection with the diaphragm's general appearance, should indicate whether it is worth salvaging. (If a diaphragm is considered past repair and if there are other repairs to be made to the meter, it is often possible that a new meter of greater capacity and advanced design can be purchased at less than the total cost of repairs to the old one.)

Reconditioning Diaphragms

Diaphragms that can be put back in service can be boiled in a non-caustic solution, or they can be oiled if their condition is good. Special solutions are on the market for boiling, as are oils especially adapted to meter diaphragm treatment. One commonly favored method of applying the oil is to brush it on evenly, then to rub it into the leather with the hands. Opinions and practices of repairmen differ widely as to the best oil and the best manner of making the application. Climatic conditions of different sections of the country have much to do with the selection of the proper oil.

A test for a diaphragm leak can be made when the meter is partly dismantled by loading one side with air under about four to six inches of water. A simple "U" gauge connected into the pressured side will indicate any leak by a drop in the column of water held. If a leak is shown, it can be located by laying the meter in a horizontal position with the diaphragm up. The diaphragm to be tested is partly raised to obtain some air within it, and the outlet port is plugged. Water is poured into the exposed compartment and the diaphragm depressed. Bubbles will locate the leaking point. If not too large, the leak may be repaired with shellac, but the meterman must be sure that the shellac penetrates through the leather to the other side.

Checking Leaks

Meters and all connections should be checked for leaks. This is done most readily by putting the meter under pressure with a "U" gauge connected into one side. If the meter has a leak it will be shown by a drop in the gauge level. Leaks can be located by brushing possible points of weakness with a soap-suds solution. Leaks can be soft-plugged, tapped out and plugged, or soldered, with the latter method the most preferable. Tight gaskets showing a leak often can be reseated; but if this does not eliminate the trouble they should be replaced.

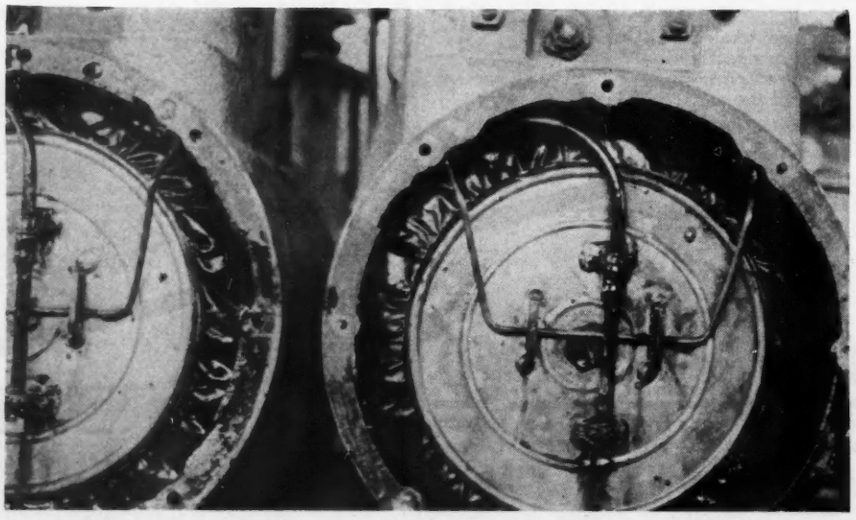
Crank arms should be checked for too much wear by holding the valves and working the tangent arm. Replacements should be made where the wear is excessive. Care should be exercised in tests involving the mechanism so that the arms will not be bent and produce a bind.

Unless in bad condition, valves can usually be reseated. In cases where the wear is very slight, the valve may be directly seated to the port. An abrasive no coarser than grade 00 should be used. Many metermen prefer a kitchen scouring powder for this work, properly assuming that it gives an exceptionally fine seat. Where wear has created an apparent unevenness, it is well to use a carborundum cloth tightly glued to a flat surface. Plate glass makes an excellent base for this work. Both the port side and the valve should be refaced individually and the finishing touches given through direct contact with the finest abrasive. An even, slow motion results in the best seat being acquired.

Stuffing Box Care

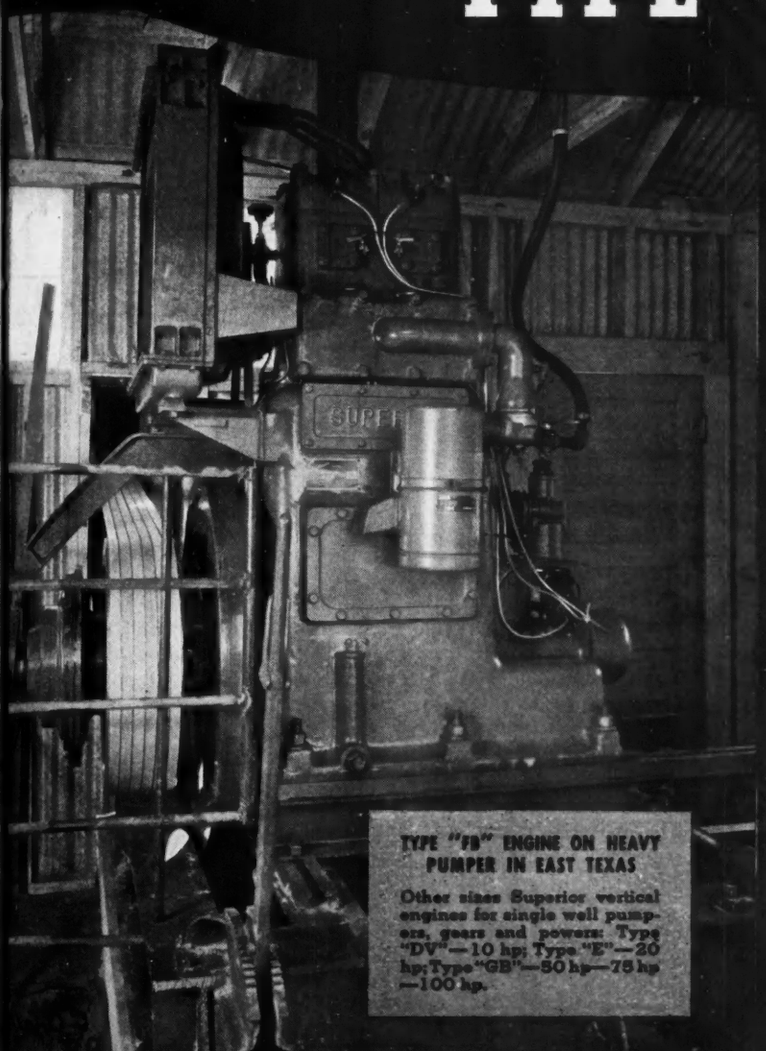
Stuffing boxes should be frequently cleaned and repacked. Just any packing material is not satisfactory, except as a temporary expedient. Either wool yarn or felt washers have been recommended with special packing lubricants. The yarn around the crank should be placed so that it is wound in the direction of crank rotation. Other packing should not be depressed so far that there is a chance for a bind to develop. A bind can be detected by passing gas through the meter at a slow rate and noting any fluctuation of the downstream pressure. If the pressure is constant the meter may be assumed free from binds.

Meter cards showing condition and work of all positive meters serve admirably in keeping track of maintenance repairs, checks, costs, types of repair, and dates of



Curb type meter capable of passing 150 cubic feet per hour. These meters have been repaired where needed and diaphragms reconditioned. Moving joints have been lubricated.

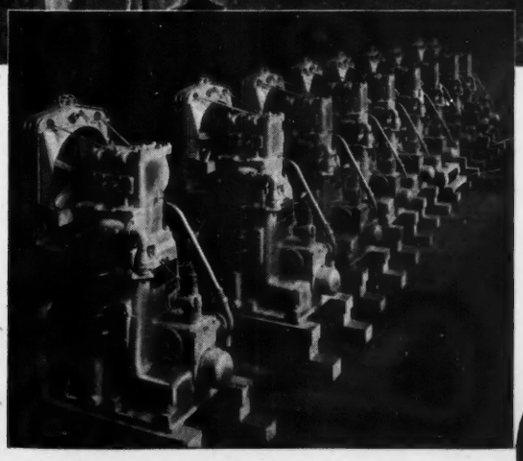
Superior
TYPE "FB"



TYPE "FB" ENGINE ON HEAVY PUMPER IN EAST TEXAS

Other sizes Superior vertical engines for single well pumpers, gears and powers: Type "DV"—10 hp; Type "E"—20 hp; Type "GB"—50 hp—75 hp—100 hp.

● This Superior Gas Engine is specially designed for heavy duty, as in East Texas, where water encroachment requires pumping large quantities of fluid at lowest possible operating costs. Saves labor because design is simple, with few parts and those easily accessible. Roller main bearings. Crosshead minimizes cylinder wear and cuts lube oil consumption. Easy to start. Complete with radiator and roller bearing clutch. Ratings: 30 hp at 600 rpm—25 hp at 500 rpm—20 hp at 400 rpm—for continuous service.



This is a shipment of Type "FB" Engines to a producer in East Texas where many are already in service.

NATIONAL

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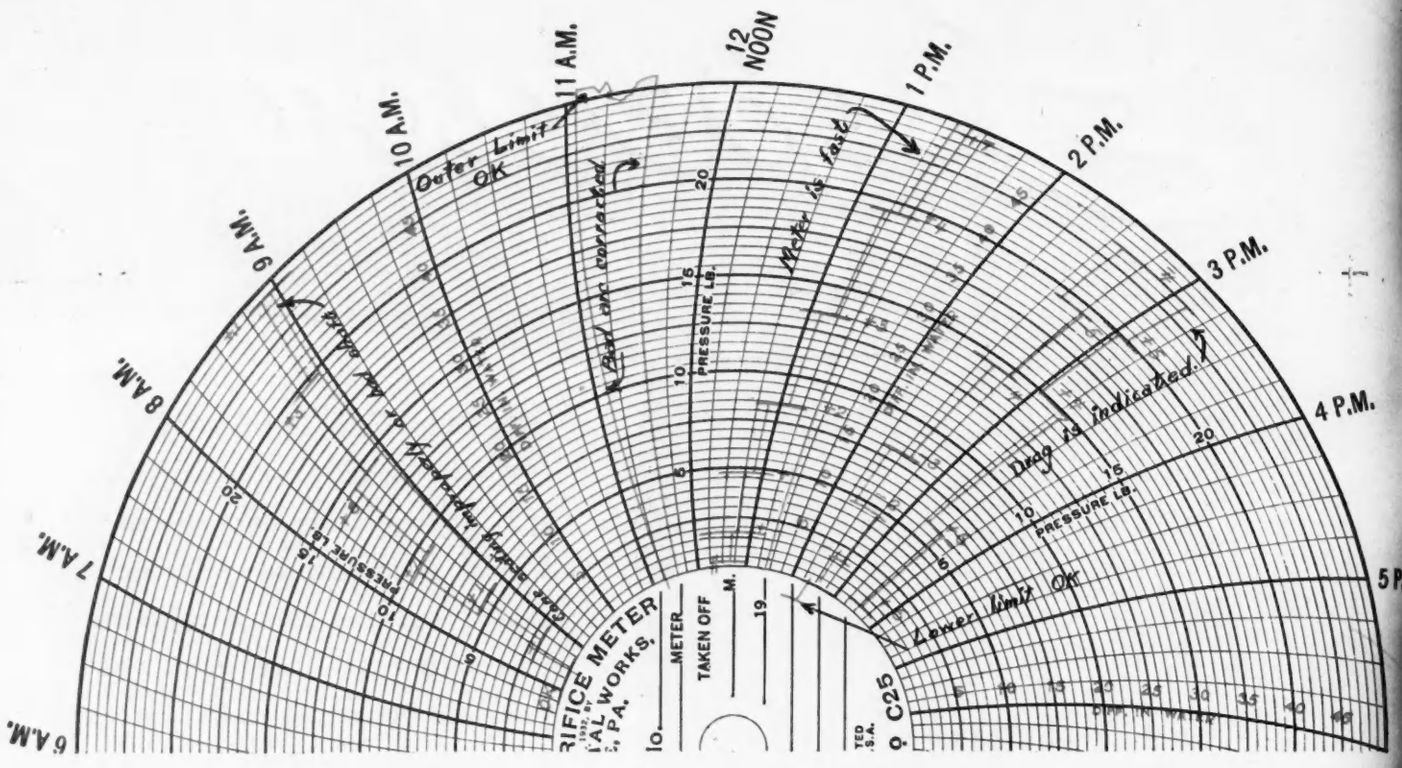


work. They should be made a part of every meterman's equipment. Parts should be kept protected and in order. Diaphragms should be protected from the atmosphere, and no meters or parts should be dumped abruptly into a car for hauling to a distant location. Although meters are rugged instruments so far as measurement goes, their undue abuse results in damage just as expensive as that which they receive while measuring gas.

Rotary Displacement Type

The rotary displacement gas meter is mechanically different from the already described positive meters. This instrument, shown in an accompanying illustration, contains two impellers which are driven by the passing gas. The impellers are so formed that their surfaces contact throughout a complete revolution, always in the same degree of displacement, and as the impeller-housing contact is likewise positive through that portion of each revolution in which measurement is obtained, the displaced volumes are constant. The impellers are so constructed that the sum of their radii from center to center is at all times equal regardless of the position of revolution. This construction results in a somewhat "dumbell" form.

Because of this type's fixed displacement maintenance is confined to gears and bearing surfaces. The shafts upon which the impellers revolve, indicator gears, shaft bearings and timing gears should be regularly lubricated. No lubricant is used in the measuring chamber as a seal. Unusually dirty gas may deposit foreign matter within the body of the meter, and this should be removed. To do this a suitable amount of fluid solvent is introduced into the meter through the upper side, or the inlet, flushing the sediment through the meter and out the discharge into the downstream connection.

Orifice Meters

Gas measurement by orifice meter is not direct measurement as no volumes are recorded; instead, the meter records factors of flow interpreted upon a revolving chart. The operation of the meter depends, briefly, upon a difference in pressure existing between two connections into the gas line, one of which is upstream and the other downstream from an orifice placed in the meter run. This pressure difference, or differential, is applied to an enclosed mercurial U tube and is interpreted in inches of water marked as differential upon the chart. The pressure existing upstream from the orifice is recorded in pounds, or both may be recorded in their respective square roots. From these factors the volume of gas passing the run at the time of measurement is calculated from established formulae. The transfer of energy from the meter run to the recording pen arms is largely mechanical, and consequently may produce mechanical errors in measurement.

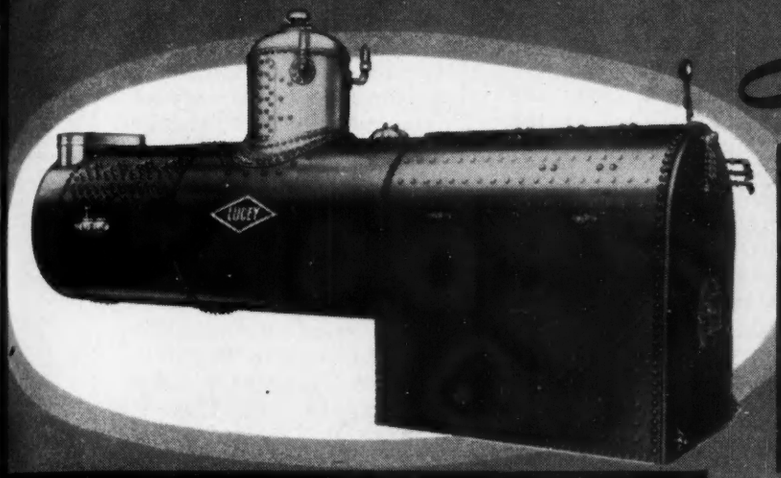
Because of its means of functioning and also because the meter cannot be checked directly for volumetric inaccuracy, service of the orifice meter is largely a maintenance problem.

There can be no set interval for ordinary meter examination. A unit that is in service in a building in which room temperature varies not more than 10 degrees—one which measures a relatively unvarying rate of flow of clean gas at a well-regulated pressure—should not require attention more than once every two months, if that frequently. Change any one of these conditions, however, and it becomes necessary to give closer attention to the meter. Consequently, considerably more than minimum maintenance is demanded by the majority of meters in service.

Disregarding the routine zero-pressure check as part of normal operation, maintenance problems develop through testing with a manometer. Such tests not only prove mechanical ability to measure correctly, but also disclose

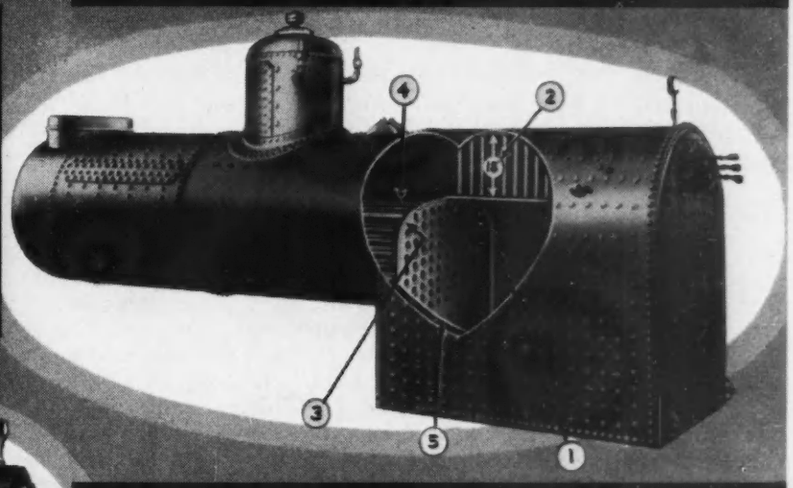
Any way you look at 'em

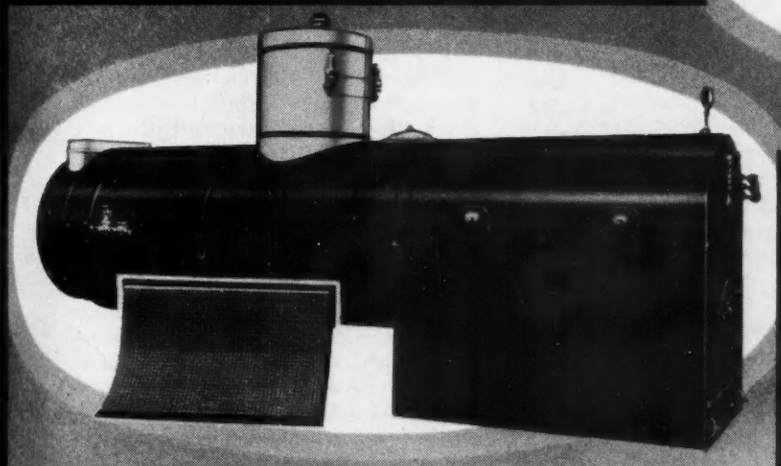
LUCEY BOILERS *Stand out*



When the Lucey Boiler was designed, Lucey Engineers effected an advanced design which insured an increased efficiency exclusive to Lucey Boilers. Repeated tests of Lucey Boilers (100 H. P. A. P. I. Rating) have given them a proven, practical rating of 132 H.P. While 40% is considered normal efficiency for an uninsulated boiler, engineering tests show Lucey Boilers are 58-60% efficient with a far greater horse-power than its A. P. I. Rating.

Construction features of Lucey Boilers account for their many distinctive features, including: All-Welded Riveteless Firebox — 18" Between Crown Sheet and outside wrapper — Arched Crown Sheet, large Corner Radii — Short Tubes (13 ft.) in Vertical Rows — 4" Water Space all around Firebox — Weld between rows of Staybolts and arranged to provide cushion effect of corner flanges.





Actual tests have proven the many advantages of the Lucey-Insulated Boilers over Uninsulated Boilers, including: Ten percent Greater Boiler Efficiency. Saving in Fuel — 10% and Up. One-Third Less Pressure Drop — Steadier Steaming. Pays for Itself in One Year Through Savings. Returns 580% on Investment in 3 Years. Effect of Weather Conditions Negligible. Low Maintenance — Reduces Scale. Removable — Waterproof.

CHECK Lucey Boilers from every angle — compare design, features and construction, and you'll understand why they are increasing in popularity and use. Lucey Boilers are delivering steam efficiency, operating economy and uninterrupted performance wherever they are used — on Drilling Rigs, in Gasoline Plants or Refineries — under every condition of weather, location or field demands.

WRITE FOR BULLETINS

141-1 on Boilers

110-2 on Insulation

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LUCEY BOILER *and* MANUFACTURING CORPORATION

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539 PETROLEUM SECURITIES BLDG.
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HOUSTON, TEXAS

what class of mechanical imperfection is present, if any.

A 50-inch manometer may be used on all 10 to 50 inch meters and is usually considered sufficient when a 100-inch meter is under test. If necessary, a mercury manometer graduated in inches of water can be used on ranges exceeding 50 inches. However, the displacement of the mercury column is so small in comparison with the displacement of the water column that any error present in the ranges above 50 inches should be even more evident with a water column at 50 inches.

How Testing Is Done

Meter testing with a manometer is done with the meter out of service. The by-pass vent valve is closed, both valves controlling the by-pass are opened, the upstream pipe tap is closed and then the downstream tap is closed. The by-pass vent valve is then opened slowly to bleed down the pressure on the meter and manifold. Mercury can easily be pulled from the meter into the line if the vent valve is jerked upon suddenly. With the meter and piping at zero pressure, the manometer is connected into the high-pressure side of the mercury chamber with the downstream side open to atmosphere through the by-pass. Although both pipe tap connections are closed during preparations, the upstream pipe tap is opened very slightly when the actual test is begun. This places a slight pressure equally against the high pressure side of the mercury chamber and against the water column in the manometer.

Of primary importance in test work is bringing the differential pen point to a positive zero on the chart. After placing or adjusting the pen to this position, it is best to jet a little gas through the manifold in order that the pen will fluctuate. With the closing of the tap the pen should come to rest on the zero line.

Pressure on the manometer is regulated by pinching the two valves in the manifold by-pass. As the water level in the manometer is increased, it should corrospond to the level of the float in the mercury chamber which records on the chart its position in inches. If all chart readings equal the readings of the manometer water, and if the pen is free of drag, the test is satisfactory. That is, provided that upon release of pressure the differential pen point return to the zero line.

Dirty mercury in a meter will usually make the preliminary zero hard to attain and will retard or dampen any fluctuation. With dirty mercury a test will almost always show a low reading, and equally low throughout the entire range of the chart. This reluctancy of the pen in recording is due to the mercury clinging to the sides of the float in the low pressure side of the mercury chamber holding it partially submerged. Mercury of exceptional dirtiness, especially if lumps of debris are in the chamber, may cause a high reading due to the dirt holding the float above the level of the mercury.

It is frequently possible to clean dirty mercury within the meter by washing well with a clean cloth soaked in gasoline. Dust alone, can often best be removed with a water-damp cloth. If the mercury has amalgamated, which is indicated by persistence to cling to the walls of the chamber and the float, it should be changed.

Provided that a meter is properly set and adjusted, dirty mercury can cause more error than any other ordinary difficulty. Because of this it is advisable to replace any mercury about which there is a question. The refills can be carried to the field in glass jars. Dirty mercury can be returned to the shop for cleaning by any of the modern systems: distillation, chemical-physical displacement, filtration or air cleaning through oxidation. The very low cost of cleaning mercury makes it practical to keep a fresh supply on hand and to make more changes than are absolutely required.

Calibration Adjustment

When a meter checks at zero and over the lower ranges, but shows a progressive high or low reading over the upper section of the scale, it is out of calibration. If high at the outer limit it is said to be "fast," if low at the outer limit, it is said to be "low." This error is in the effective length of the float arm, and is corrected by lengthening the arm when the meter is fast and shortening it when the recording is below the actual water column indication.

A meter test that appears to be accurate but shows high or low across the central portion of the gradation, or even at either extreme, ordinarily means a differential shaft out of true, or a poorly seated cone. In either case a replacement is usually necessary. This error can usually be told, for a meter that is out of calibration for the former error would be constantly progressive in proportion to the inch measurement, and the latter would exceed normal progression.

At times a test may disclose a sluggishness over the entire range. This is usually best checked by bringing the water level in the manometer up to, but not above, the point at which the check is desired. As: the water is brought to, but not above, 21 inches, 31 inches, 41 inches. In each instance, the pen lagged about two tenths of an inch below the actual pressure being applied. Likewise, in returning the check down the chart range, the meter lagged on the high side of the lines. Such error is drag, and may be located in the rear bearing, in a tight stuffing box, or in one in which packing has hardened, in grit within the seat, or in a metal bind. The trouble is overcome by locating the cause and correcting for it. Following this, the meter should be rerun to assure freedom of movement without drag.

Arm and Pen Trouble

Although the static, or pressure gauge element of the meter is relatively free from trouble, it can develop its own peculiar ills. A sharp point on the pen can dig into the face of the chart slightly, holding it to a curve until the pull of the spring is sufficient to overcome the inertia. This results in a series of steps up and down the pressure range. The same indication may mean that the lift arm has been forced against the pen arm or arms, producing the drag on the chart.

It sometimes occurs that mercury is forced into the static spring, weakening it so that a replacement is necessary. This is usually indicated when the degree of error progresses rapidly when pressure is increased. The same difficulty may be caused by excessively sour gas acting on the interior of the tube. Leakage at static spring or tube connections cause low pressures, but are usually audible and are consequently readily located and corrected with a drop of solder.

The greatest insurance for accurate measurement is frequent meter inspection. Manometer tests should be run as often as warranted by the service of the meter. These practices reduce maintenance costs to a minimum and almost eliminate the necessity of periodic reconditioning in a division shop.

Outlook Good But Restricted Gasoline Output Needed

By L. J. LOGAN, Associate Editor

THE industry is continuing to jeopardize the future of the market for gasoline, its principal product, through the course that is being pursued with regard to fuel oil production.

In taking care of current and anticipated relatively large demand for heating oils, the industry has been charging record quantities of crude to refinery stills, with little regard for yields of the different products. Consequently, relatively large production of light fuel oil has been accompanied by proportionally large output of gasoline.

Preferable, economically, would be smaller runs to stills, larger yields of heating oils, and smaller yields of gasoline, under which conditions gasoline stocks might be held down to more conservative levels.

Such a course of more moderate refinery runs and better adjustment of yields will be essential in coming months if a stable gasoline market is to be assured.

Peak Runs to Stills

After having exceeded all previous records in the week ended October 14, refinery runs were further increased 50,000 barrels to a new all-time peak of 3,650,000 barrels daily in the week ended October 21. At that rate, the plants were processing 13 percent more crude than in the corresponding week last year. In the week of October 14 the runs had been 8.7 percent above the level of a year before. These gains over a year ago in refinery throughput have occurred despite the fact that total petroleum demand has been running only around 6 percent larger in 1939 than in 1938.

The large runs to stills have resulted primarily from the unusual situation in which demand for fuel oil has been relatively large while stocks have been comparatively small. Furthermore, in consequence of the unsatisfactory regulation of yields, that unusual situation has become more acute instead of improving. The stocks of heating oils have become increasingly subnormal.

Refined Stocks Increase

Continued unsatisfactory results of operations were reflected in the statistics of the week ended October 21. The record refinery runs resulted in an addition of 671,000 barrels of gas oil and distillate fuel to the deficient stocks of those heating oils; and stocks of residual fuel oils, also light in relation to current large consumption, attending increased industrial activity, were increased 280,000 barrels. But

Oil Demand Better in 1939 Than in 1938

Figures indicate barrels and are from Bureau of Mines

ITEM	AUGUST 1938	AUGUST 1939	AUGUST Percent Change	FIRST 8 MONTHS 1938	FIRST 8 MONTHS 1939	FIRST 8 MONTHS Percent Change
SUMMARY						
Total Demand	119,902,000	126,894,000	+ 5.8	865,995,000	921,098,000	+ 5.6
Daily average	3,868,000	4,093,000	+ 5.8	3,564,000	3,791,000	+ 5.6
Exports:						
Crude petroleum	7,003,000	5,969,000	— 14.8	54,430,000	48,222,000	— 11.4
Refined products	10,763,000	11,529,000	+ 7.1	78,060,000	80,034,000	+ 2.5
Domestic Demand:						
Motor fuel	50,459,000	53,728,000	+ 6.5	342,687,000	362,454,000	+ 5.9
Kerosene	4,292,000	4,436,000	+ 3.3	34,798,000	38,208,000	+ 9.8
Gas oil and distillate fuels	7,847,000	8,229,000	+ 4.9	71,080,000	82,586,000	+ 16.0
Residual fuel oils	23,665,000	26,012,000	+ 9.9	186,134,000	205,998,000	+ 10.7
Lubricants	2,002,000	1,963,000	— 1.9	13,750,000	14,998,000	+ 9.1
Wax	81,000	73,000	— 9.9	721,000	603,000	— 16.3
Coke	473,000	844,000	+ 76.8	3,485,000	4,638,000	+ 25.0
Asphalt	3,201,000	3,532,000	+ 10.3	15,936,000	17,131,000	+ 7.5
Road oil	1,581,000	1,576,000	— 0.3	5,575,000	5,914,000	+ 7.8
Still gas	5,753,000	5,925,000	+ 3.0	41,751,000	43,883,000	+ 5.1
Miscellaneous	158,000	211,000	+ 33.8	1,207,000	1,506,000	+ 24.8
Losses	2,624,000	2,867,000	+ 9.3	16,381,000	14,923,000	— 8.9
Total domestic demand	102,136,000	109,396,000	+ 7.1	733,505,000	792,842,000	+ 8.1
Daily average	3,295,000	3,529,000	+ 7.1	3,019,000	3,263,000	+ 8.1
TOTAL DEMAND FOR PRODUCTS						
Motor Fuel:						
Domestic	50,508,000	53,728,000	+ 6.4	342,687,000	362,454,000	+ 5.9
Exports	4,829,000	4,308,000	— 10.8	33,023,000	31,288,000	— 8.2
Total	55,337,000	58,036,000	+ 4.9	375,710,000	393,742,000	+ 4.9
Kerosene:						
Domestic	4,292,000	4,436,000	+ 3.4	34,798,000	38,208,000	+ 9.8
Exports	604,000	841,000	+ 39.4	4,890,000	5,340,000	+ 9.2
Total	4,896,000	5,277,000	+ 7.8	39,688,000	43,548,000	+ 9.7
Gas Oil and Distillate Fuels:						
Domestic	7,847,000	8,229,000	+ 4.9	71,080,000	82,586,000	+ 16.0
Exports	2,733,000	3,361,000	+ 2.3	21,219,000	22,136,000	+ 4.3
Total	10,580,000	11,590,000	+ 9.5	92,299,000	104,722,000	+ 13.5
Residual Fuel Oils:						
Domestic	23,665,000	26,012,000	+ 9.9	186,134,000	205,998,000	+ 10.7
Exports	1,667,000	1,613,000	+ 3.2	11,398,000	12,134,000	+ 6.4
Total	25,332,000	27,625,000	+ 9.1	197,532,000	218,132,000	+ 10.4
Lubricants:						
Domestic	2,002,000	1,963,000	— 1.9	13,750,000	14,998,000	+ 9.1
Exports	800,000	1,204,000	+ 50.5	6,457,000	7,484,000	+ 15.9
Total	2,802,000	3,167,000	+ 13.0	20,207,000	22,482,000	+ 11.2
Wax (thousands of pounds):						
Domestic	22,619	20,503	— 9.4	201,666	168,422	— 16.5
Exports	13,883	14,673	+ 5.7	116,997	156,286	+ 33.6
Total	36,502	35,176	— 36.4	318,663	324,708	+ 1.9
Coke (short tons):						
Domestic	94,500	168,800	+ 78.5	697,000	927,700	+ 33.0
Exports	13,100	25,400	+ 94.0	81,000	173,800	+113.0
Total	107,600	194,200	+ 80.5	778,000	1,101,500	+ 41.5
Asphalt (short tons):						
Domestic	582,100	642,200	+ 10.5	2,897,800	3,114,600	+ 7.5
Exports	1,900	3,300	+ 73.5	32,100	30,100	— 6.2
Total	584,000	645,500	+ 10.5	2,929,900	3,144,700	+ 7.3
Road Oil:						
Domestic	1,581,000	1,576,000	— 0.3	5,575,000	5,914,000	+ 7.8
Miscellaneous:						
Domestic	158,000	211,000	+ 33.6	1,207,000	1,506,000	+ 24.8
Exports	5,000	4,000	— 20.0	73,000	60,000	— 17.8
Total	163,000	215,000	+ 32.0	1,280,000	1,566,000	+ 22.4

Somewhat Less Favorable Gasoline Demand Indicated by Latest Bureau of Mines Forecast

(Barrels)

MONTH	Total Demand for Domestic Crude	MOTOR FUEL DEMAND		
		Domestic	Export	Total
August:				
August, 1939, forecast	109,180,000	52,900,000	4,200,000	57,100,000
August, 1938, actual	108,585,000	50,459,000	4,829,000	55,288,000
Change from year ago	+0.5%	+4.9%	—13.0%	+3.3%
September:				
September, 1939, forecast	105,320,000	49,100,000	4,000,000	53,100,000
September, 1938, actual	102,029,000	46,058,000	3,528,000	49,586,000
Change from year ago	+3.2%	+6.6%	+13.4%	+7.1%
October:				
October, 1939, forecast	111,300,000	48,900,000	4,500,000	53,400,000
October, 1938, actual	107,528,000	46,272,000	4,526,000	50,798,000
Change from year ago	+3.5%	+5.7%	—0.6%	+5.1%
November:				
November, 1939, forecast	108,600,000	46,700,000	3,900,000	50,600,000
November, 1938, actual	102,717,000	44,991,000	3,698,000	48,689,000
Change from year ago	+5.7%	+3.8%	+5.5%	+3.9%

along with those welcome additions to stocks of the fuel oils, there occurred a contra-seasonal backing up of 859,000 barrels in gasoline storage, although gasoline stocks already were larger than desirable.

At the end of the week, the stocks of gas oil and distillate fuel were about 2.8 percent smaller than a year previously, whereas demand for those lighter fuel oils has been more than 10 percent larger in 1939 than in 1938.

Stocks of residual fuel oils, meanwhile, were 8.6 percent smaller than a year before, although demand has been around 10 percent better.

Stocks of finished and unfinished gasoline, having totaled 72,122,000 barrels on October 21, were 6.5 percent larger than on the comparable date last year. Gasoline demand has been running about 5 percent higher this year than last year, and, therefore, the gain in stocks over a year ago would be justified if last fall's inventory had been moderate. But the stocks a year ago were seriously excessive and eventually they led to abnormally weak markets and low prices.

Gasoline Outlook Unfavorable

Consequently, the present gasoline situation, embodying an excess of stocks roughly proportional to that a year ago, is definitely unsatisfactory.

Quite probably, considerable concern over the gasoline picture would be felt generally at present except for hopes, yet to be fulfilled, that exports may increase abnormally because of the European war.

However, the gasoline stocks are regarded as being at least 10,000,000 barrels larger than necessary for taking care of normal domestic and export business, and an extraordinary expansion of exports would be required to eat materially into that surplus. In the first eight months of this year total exports of gasoline from the United States averaged approximately 4,000,000 barrels monthly, having been about 8 percent smaller than in 1938.

Changes from Year Ago in Stocks of Crude Oil and Refined Products in the United States

Barrels of 42 U. S. Gallons

LATEST MONTHLY DATA

(Source: Bureau of Mines)

ITEM	Stocks at End of August		
	1938	1939	Percent Change
Summary			
Crude Petroleum:			
Refinable in U. S.	285,640,000	238,479,000	—16.5
Heavy in Calif.	17,575,000	14,253,000	—18.9
Natural gasoline	8,022,000	6,624,000	—17.4
Refined products	268,022,000	262,738,000	— 2.0
Total, all oils	579,259,000	522,094,000	— 9.9
Days' supply:			
August basis	150	128	—14.7
8 Mo. basis	163	138	—15.3
Products			
Gasoline:			
Finished	64,599,000	66,448,000	+ 2.9
Unfinished	6,363,000	5,887,000	— 7.6
Total	70,962,000	72,335,000	+ 1.9
Kerosene	10,149,000	9,361,000	— 7.8
[1]Gas Oil and Distillate Fuels	28,841,000	28,982,000	+ 0.5
[1]Residual Fuel Oils	100,431,000	95,897,000	— 4.5
Lubricants	7,969,000	7,069,000	—11.3
Wax (thousands of pounds)	134,103	108,173	—19.5
Coke (short tons)	650,600	682,000	+ 4.8
Asphalt (short tons)	566,400	529,500	— 6.4
Road Oil	948,000	985,000	+ 3.9
Miscellaneous	274,000	282,000	+ 2.9
Other Unfinished Oils	41,601,000	40,819,000	— 1.9

LATEST WEEKLY DATA

(Sources: Crude Stocks, Bureau of Mines; all other figures, American Petroleum Institute)

STOCKS OF:	Oct. 22, 1938	Oct. 21, 1939	Percen Change
Crude Oil	[2]277,001,000	[3]229,870,000	—17.0
Gasoline	67,695,000	72,122,000	+ 6.5
[4]Gas Oil & Distillate Fuels	32,252,000	31,360,000	— 2.8
[4]Residual Fuel Oil	120,495,000	110,136,000	— 8.6

[1] At refineries only. [2] Stocks October 15, 1938.
[3] Stocks October 14, 1939.
[4] At refineries only, except in California.

So far, no material pick-up in gasoline exports is definitely in prospect. In its forecast of motor fuel demand for November, the Bureau of Mines, with the aid of exporters, estimated that shipments abroad would be 5.5 percent larger than in November of last year. The November, 1939, exports were estimated at 3,900,000 barrels, compared with 3,698,000 barrels actually shipped in November, 1938.

In its November forecast, the Bureau of Mines also laid particular emphasis on the desirability of obtaining relatively large yields of distillate fuel oils. "While runs to stills have been in excess of recent forecasts," the bureau stated, "yields of distillate fuel oils have been lower than anticipated. Consequently, distillate stocks east of California are below normal. The trends of market demand indicate a large relative increase in the amount of light heating oils required during the winter. To meet this situation, the bureau raised its estimate of required runs to stills for October and a further increase is indicated in the current forecast for November. Even these estimates may prove inadequate unless distillate yields are substantially higher than last year."

Generally Favorable

Aside from the danger of excessive gasoline stocks, the outlook for the industry is generally favorable, as demand promises to continue good, while inventories are moderate. The Bureau of Mines forecast of total demand for gasoline in November is 3.9 percent above the actual demand in November of last year, domestic consumption being expected to show a 3.8 percent gain and exports a 5.5 percent increase. These figures indicate an extension of the favorable trends of recent months.

As indicated in an accompanying table, total demand for United States oils was around 6 percent better than last year for both August and the first eight months of this year, with domestic consumption up around 8 percent. Total exports have been somewhat smaller in 1939 than in 1938, a decrease in shipments of crude having more than offset a slight increase in shipments of refined products.

While light fuel oils have been in exceptionally good demand, gains around 10 percent have been shown by residual fuel oils, kerosene, and lubricants; and smaller increases have occurred in demand for gasoline, asphalt, road oil, and wax.

WORLD DEVELOPMENT and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

Mexican Drilling

Less than one oil well per month completed since industry was expropriated . . . Three wildcats fail

During the 18 months since expropriation of foreign owned oil properties in Mexico, or from March 18, 1938, through September 19, 1939, the Mexican government's petroleum administration has brought in 12 new producers for an aggregate initial flow of 28,126 barrels.

Three of these, for a total initial production of 5065 barrels, were completed in 1938, all in the Isthmus of Tehuantepec. Two are El Plan field completions, the other is in El Burro field.

Nine completions of the current year, for a total initial yield of 23,061 barrels, are scattered over the Tampico, Poza Rica and Isthmus regions—1 in Tampico, 4 in Poza Rica and the remaining 4 in El Plan field of the Isthmus.

Additional drilling operations by the government's production department since expropriation, including nonproductive completions and as yet unfinished jobs, total 19. Of these 8 have been checked off as dry or salt water holes, 1 has suspended operations, 1 is waiting with rotary rig to spud in, and 9 are drilling. One of the latter, in the Poza Rica area, at 6710 feet, is designated as a production test.

Save in one case—the Poza Rica 23, spudded in January 1, 1938—all of the operations were started after the expropriation. Locations drilled in those areas formerly held by the foreign companies were made, however, prior to expropriation.

The three producers completed in 1938 in the Isthmus region are as follows:

El Plan field—El Plan 55, spudded in June 8, completed November 15 at 2675 feet for an initial production of 3780 barrels; Petronac 2, spudded in March 25, completed June 12 at 2535 feet for an initial of 1222 barrels.

El Burro field—El Burro 58, spudded in October 24, completed December 9 at 2460 feet for an initial of 63 barrels.

Completions This Year

The list of nine producers brought in since January 1, 1939, is as follows:

Tampico region—Rincon 26, spudded in May 15, completed June 29 at 1308 feet for an initial of 1000 barrels.

Poza Rica region—Poza Rica 25-A, spudded in August 3, 1938, completed April 19, 1939, at 7860 feet for initial of 4775 barrels; Poza Rica 29, spudded in July 28, 1938, completed April 1, 1939, at 7757 feet for initial of 4662 barrels; Poza Rica 33, spudded in December 3, 1938, completed May 26, 1939, at 7773 feet for initial of 7377 barrels (the largest initial flow); Petronac 12, spudded in February 16, completed June 17, at 7741 feet for initial of 3099 barrels.

Isthmus of Tehuantepec, El Plan field—El Plan 56, spudded September 16, 1938, completed June 15, 1939 at 2580 feet for an initial of 378 barrels; El Plan 74, spudded in June 25, completed August 16 at 2798 feet for initial of 1417 barrels; El Plan 75, spudded January 14, completed April 3 at 2680 feet for initial of 157 barrels; Petronac 5, spudded October 23, 1938, completed August 1, 1939, at 2420 feet for an initial of 176 barrels.

An early issue of The OIL WEEKLY will publish an article by Dr. F. B. Plummer of the University of Texas dealing with geology of the Dominican Republic, where Seaboard Oil Corporation interests recently have developed commercial production.

Dr. Plummer was retained by parties interested in development of a concession there to make a study of the region surrounding the discovery.

Other Operations

Summary of other operations is as follows:

Tampico region—Chijol 135, spudded September 5, 1938, finished November 4, 1938, at 2500 feet, dry hole; Camino 13, spudded November 11, 1938, finished January 7, 1939, at 2150 feet, dry hole; Pedro 49, spudded January 6, 1939, finished February 24, 1939, at 1925 feet, salt water; Rincon 25, spudded February 22, 1939, finished April 26, 1939, at 2440 feet, salt water; Rincon 27, spudded May 19, 1939, finished August 11, 1939, at 2230 feet, salt water; Rincon 24, spudded August 10, 1939, drilling at 1270 feet; Rincon 23-A, spudded September 2, 1939, shut down at 397 feet on account of the rains.

Poza Rica region—Poza Rica 23, spudded January 20, 1938, drilled to 6931 feet, now reaming at 3723 feet; Poza Rica 34, spudded April 26, 1939, cemented casing at 7607 feet; Poza Rica 35, spudded July 20, 1939, drilling at 4329 feet; Poza Rica 38, spudded August 25, 1939, drilling at 1183 feet; Petronac 10, spudded May 2, 1938, production test at 6710 feet; Petronac 9, rotary rig waiting to spud in.

Isthmus of Tehuantepec, El Plan field—El Plan 58, spudded July 21, 1938, finished September 29, 1938, at 3125 feet, dry hole; El Plan 66, spudded May 15, 1939, finished August 2, 1939, at 3381 feet, dry hole; El Plan 79, spudded August 15, 1939, drilling at 2268 feet; El Plan 68, spudded September 14, 1939, drilling at 425 feet; Petronac 3, spudded August 28, 1938, finished October 26, 1938, at 2470 feet, dry hole; Petronac 6, spudded October 23, 1938, operations suspended at 2035 feet.

Operations bearing the name Petronac are on areas held by the government prior to the expropriation.

Drilling operations now being carried on in Poza Rica region that bear the name Poza Rica are drilling on the flanks of the structure. Those in the same region bearing the name Petronac are being drilled on or near the crest.

Three Wildcats

Three exploration tests, none of which has resulted in production, have received the attention of Petroleos Mexicanos, the government oil administration, since the expropriation.

Ojital 1 on lot 76 of Ojital y Potrero, municipality of Papantla in Veracruz, on a syncline to the southeast of Poza Rica, was spudded in by Sinclair interests. Operations on this test were suspended prior to the expropriation. Under the government administration, operations were resumed November 23, 1938, at 6973 feet, the depth reached under Sinclair operation, and the test was carried down to 8478 feet where, without production, it was abandoned March 16, 1939.

San Jose 6, in San Jose del Carmen, Veracruz, south of El Plan field in the Isthmus of Tehuantepec, was spudded in by the Mexican Eagle Oil Company, but operations were stopped prior to March, 1938, at 4930 feet on account of stuck pipe. From December 17, 1938, to

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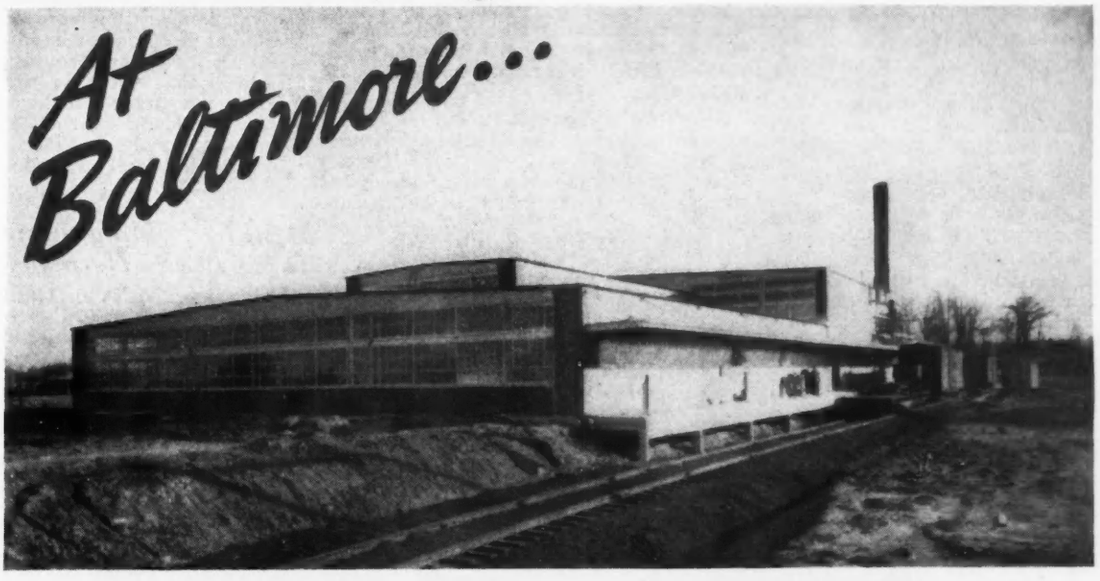

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GENERAL ELECTRIC

March 11, 1939, the government administration engaged in fishing job, then suspended operations.

San Jose 7, another Mexican Eagle Oil Company exploration in San Jose del Carmen, suspended drilling prior to March, 1938, at 5605 feet. December 17, 1938, the government pulled casing, plugged and abandoned.

Independent operations in the Tampico region include: Arriga 4, in Altamira, spudded March 31, 1938, preparing to resume drilling at 2230 feet; Meza Moreno 1, at Cues in Altamira, spudded February 3, 1938, temporarily shut down at 2964 feet.

Using Seismographs

Four geologists on the staff of Petroleos Mexicanos have been engaged in exploration work in various regions, according to official announcement. The administration also has 2 seismograph crews who are working in Veracruz and Tabasco.

Approximately 1200 square miles in these two states have been aerially mapped in preparation for future exploration, it was announced.

Pipe line construction under government operation includes the 62-kilometer 12-inch line from Poza Rica to Alamo. This was built to shorten connection with existing pipe line from Alamo to Tampico.

Production Down

Average daily production of all fields in Mexico for the first 6 months of 1939 was approximately 102,000 barrels as compared with 131,500 barrels from January 1 to March 18, 1938, the 77-day period immediately preceding expropriation. Average daily production today is at about the same level as during the first six months of this year.

Of the 102,000 barrels produced daily, 98,000 barrels represent government production, the remaining 4000 barrels being production of companies not affected by the expropriation. Government production from expropriated properties totals about 85,000 barrels daily, the other 13,000 to make up the total of 98,000 being from properties that have been held by the government all along.

Total production of Mexico for 1938 was 38,280,000 barrels as compared with 46,690,000 barrels for 1937. The average daily production in 1937 was about 127,900 barrels. Estimates on the basis of production during the first 6 months of 1939, forecast total production for this year at more than 37,000,000 barrels. Taking into consideration the estimate for this year, Mexico will have produced by the end of 1939 a total of more than 1,966,210,000 barrels of petroleum.

Consumption Figures

Average daily consumption of petroleum products in Mexico during the first three months of 1939 was, according to official figures, as follows, in gallons: gasoline, 451,800; fuel oil, 1,273,629; kerosene, 101,950; lubricants, 29,703; gas and Diesel oil, 87,030; crude, 11,117. For the following the average daily consumption for the same period is given in pounds: raw or natural gasoline, 8,309; vaseline, 2,444; paraffin, 230,972; grease, 21,306; asphalt, 216,934.

Government stocks of crude on hand September 20 in the fields, at the refineries and at Barra de Tuxpam, tidewater loading station on the Gulf of Mexico, totaled, according to official figures, approximately 6,009,000 barrels. Of this, the greater portion, or approximately 3,091,200 barrels, was at the 6 refineries, Ciudad Madero, Mata Redonda, Arbol Grande and Bella Vista in Tampico, Atzcapotzalco in Mexico City and Minatitlan in Veracruz. The total in the fields was 2,499,500 barrels, the remaining 418,300 barrels being at Barra de Tuxpam.

Mexico furnishes Italy with 150,000 tons of oil

Statistics recently published by Italy showed that Mexico has shipped 150,000 tons of oil to that country thus far this year and that Venezuela has shipped 40,000 tons.

Most of the Mexican-Italian oil deals are on a barter basis, Italy having agreed to build three tankers in exchange for crude produced in Mexico. None of the tankers has been delivered to Mexico.

Most of the 64,000 tons of crude oil reportedly exported by Mexico during a week in mid-September was consigned to European non-combatants, the remainder being shipped to the United States, according to an announcement by Petroleos Mexicanos, the government-controlled oil company there. All shipments were from Tampico on tankers said to have arrived there recently.

Petroleos Mexicanos has released a statement saying non-combatant nations in Europe are seeking to enter into new oil contracts with the Mexican government.

Two tankers of Mexican oil seized by British

Two Norwegian tankers enroute from Houston to Sweden loaded with Mexican oil obtained by William R. Davis interests for sale abroad were seized during the week by British men-of-war, the seizure being allegedly based on British belief that the oil actually was destined for Germany.

In the event the English prize court upholds the seizure, it is considered likely Davis interests will be paid for the confiscated oil.

Turner Valley proration protection to little man

Development of chaotic conditions has been prevented and protection given to the small producer under the proration plan now applying to Turner Valley, Alberta, Canada, Dr. George G. Brown, consulting engineer and professor of economics at the University of Michigan, told the McGillivray Royal Commission as that body resumed its inquiry into the Alberta petroleum industry last week.

Brown, who was called to testify by J. J. Frawley, commission counsel, recommended continuation of the Alberta Conservation Board, but made it clear that he did not favor provincial government regulation of oil and gasoline prices. The play of "free competition" between producing areas throughout the continent and the world was sufficient protection to the consumer, he maintained.

Discussing monopoly, particularly in connection with the absorbtion of a number of small companies by one major company, the witness pointed out that the large company operated on a "business basis," while the small operator many times was a speculator. "If one company wants to pay the price and buy all the wells, I see no disadvantage," he said.

Asked if this would not be a monopoly which would "have to be paid out of the public pockets in the retail price of gasoline," Brown added:

"I doubt it. A fictitiously high price could not be maintained in the face of general competition from other fields. More oil would come in from the states. No company could get a monopoly sufficient to 'rig the price' up to take advantage of the consumer."

Brown said he believed a fair price for Alberta crude to be between $1.20 and $1.30 a barrel. The field price is now $1.23.

Drilling holding to most rapid rate in Germany

Drilling activities in Germany were being carried on at full speed as much as six months before initiation of current hostilities and have continued at the most rapid pace possible since then, according to a statement made last week by an executive of an European oil company visiting in United States.

Drilling contractors there, as well as in Austria and Hungary, are having difficulty getting delivery on new rigs from European manufacturers to step up drilling in keeping with wartime requirements. American equipment is difficult to obtain due to conditions of war and exchange.

Chances for oil better in Dominican Republic

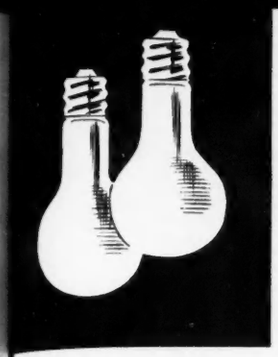
On the basis of surface geology, potentialities of the Dominican Republic as a country of structures suitable for the accumulation of oil are greater than those of Cuba and some of the other islands of the Caribbean, according to a statement made before the Houston Geological Society October 26 by Dr. Frederick Plummer, head of the department of Economic Geology at Texas University.

Dr. Plummer's talk, founded on a recent trip there on behalf of Seaboard Oil Company, brought out that the republic is more like California in main structural features than Texas—that the Cretaceous is formed mostly of metamorphics, the Tertiary is much less disturbed and contains interesting limestones—that the Oligocene contains three series of interest ranging from 200 to 500 feet in thickness.

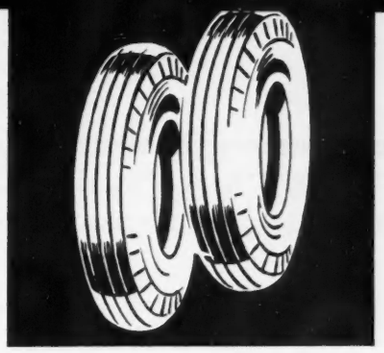
Two anticlines have been found thus far; two commercial wells completed on holdings of Seaboard Oil Company, both producing 21-gravity oil. Details of these were published in a recent issue of THE OIL WEEKLY.

Iran production

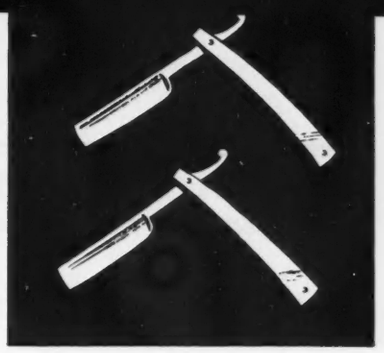
Production of crude oil in Iran in June amounted to 828,000 tons, bringing the total production for the first half of the year up to 5,060,000 tons, according to information from Anglo-Iranian Oil Company.



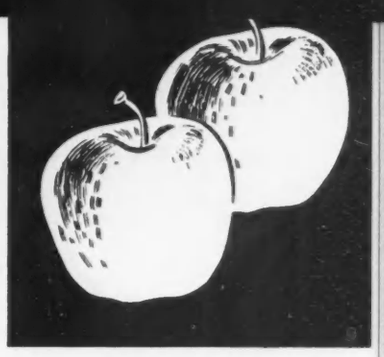
HESE BULBS LOOK ALIKE
ne will burn for 100 hours.
ne will burn for 1000 hours.



THESE TIRES LOOK ALIKE
One will give 15,000 miles.
One will give 60,000 miles



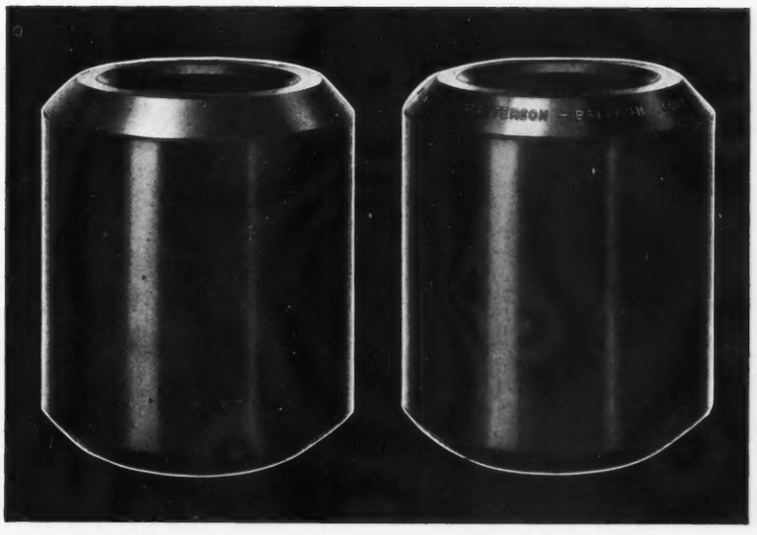
THESE RAZORS LOOK ALIKE
One will lose its edge quickly.
One will keep keen for many shaves.



THESE APPLES LOOK ALIKE
One is dry and tasteless.
One is juicy and luscious.

YOU CAN'T JUDGE BY LOOKS

THESE PROTECTORS LOOK ALIKE



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MEN IN THE INDUSTRY'S NEWS

NEW PRESIDENT OF INDEPENDENT PETROLEUM ASSOCIATION A MAN OF MANY EXTRA-INDUSTRIAL ACTIVITIES

FRANK BUTTRAM IS EQUALLY AT HOME IN POLITICS, CIVICS, FINANCE AND EDUCATION.

FRANK BUTTRAM of Oklahoma City, independent oil man and geologist who was elected president of the Independent Petroleum Association of America in Fort Worth October 20, an act in itself a testimonial to his prominence within the industry, is slated to be further honored December 1 with a dinner given for him by the Oklahoma City Chamber of Commerce in appreciation of his civic accomplishments.

Buttram's life has been such a busy one in the realms of oil, politics, civic and educational activities, to say nothing of finance and art collecting that it is something of a mystery how he has had time to organize and fill important executive positions in two oil companies. Back as early as 1926 this 53-year old Oklahoman had become sufficiently active in civic affairs to be elected Oklahoma City's "Most Useful Citizen." Four years later he was a gubernatorial candidate.

Fortuna Oil Company was founded by him in 1914, Buttram Petroleum Corporation in 1920, and in 1939 the city's Chamber of Commerce elected as president the "Shrinking Violet," as his modesty has caused him to be called. His scientific accomplishments include discovery of Cement pool in Oklahoma and the early mapping of a giant structure now called the Balcones fault.

Buttram's extra-industry responsibilities have included the following: president of Oklahoma City Community Chest in 1925 and 1933; chairman of committee to establish city manager form of government, of committee to raise money for the city's YWCA, of Oklahoma City board and state board under NRA in 1933 and 1934, of board of regents of University of Oklahoma from 1923 to 1930, of national drive for Stadium-Union Memorial, same school, of board of Federal Reserve Bank in Oklahoma City in 1926.

In addition to the foregoing, Frank Buttram is a director of the city's Provident association and was state director of the National Emergency Council in 1933 and 1934. Financial interests include executive positions in First National Bank and Trust Company and in Oklahoma City Mutual Savings and Loan Association.

Buttram, who holds a master's degree of Oklahoma University, is a Shriner, a Sigma Chi, and belongs to most of the clubs or associations connected with the oil business. When not busy with any of the foregoing he has found time to prepare published papers on Oklahoma's geology and to do a little golfing and picture taking.

Carman Photo

FRANK BUTTRAM

JAMES TERRY DUCE and Fred Sealy, executives of The Texas Company headquartered in New York, recently flew to Barranquilla, Colombia, in connection with inaugural ceremonies of South American Gulf Oil Company's pipe line from the Barco concession to tidewater at Covenas on the Caribbean.

D. V. CARTER, chief petroleum engineer for Magnolia Petroleum Company, Dallas, is vacationing in Illinois, with his schedule arranged so as to witness a maximum number of Big Ten football games.

CLARK A. GRUVER, petroleum engineer and a native of Augusta, Kansas, will board ship at New York City next week for Venezuela, where he will be assigned to duty with a unit of Socony-Vacuum Oil Company. He has been receiving special training for several months with Magnolia Petroleum Company in Texas and Louisiana fields.

DR. JOHN C. HAFF, petrologist, has been engaged by the Colorado School of Mines as an assistant professor of geology for the ensuing year. Dr. Haff studied under the eminent geologist, Dr. Charles P. Berkey, and received his Ph.D. from Columbia University. In 1936 he was awarded a traveling fellowship by Columbia University, and during the following year studied petrologic methods and their application at Innsbruck, Austria and Zurich, Switzerland. In 1938-1939 he was on the staff of Wichita University, and just prior to the assumption of his professorial duties at the Colorado School of Mines he was in the petrographic laboratory of the Bureau of Reclamation in Denver.

WILLIAM J. OVERTON was elected secretary of the Engineers Club of Tulsa and also secretary of the petroleum division of the American Society of Mechanical Engineers. Overton has been a resident of Tulsa for the past 25 years, being associated with J. J. Cease Electric Company and for the past four years has been office manager and auditor for Federal Storage and Van Company. Overton studied electrical engineering at Kansas State College and also was a trainee at Westinghouse Electric & Manufacturing Company, Pittsburgh.

RALPH BOLTON of London, formerly in in charge of European production activities of interests of Standard Oil Company of New Jersey, left Houston last week for New Orleans where he will continue study of fields of the United States. Prior to coming to Houston, Bolton, who allegedly is on vacation, visited fields of California. From the Louisiana producing districts he will go to Tulsa, which will serve as headquarters for visits to fields of Oklahoma and Kansas. Bolton, generally referred to as manager of Romano Americana, Standard Oil Company of New Jersey's operating subsidiary in Rumania, is being relieved temporarily by G. L. Estabrook of New York.

CLINT W. JOSEY and Don W. Josey, owners of the Rancho and Gem oil companies, with headquarters in Dallas, and Monroe H. Goode, independent, returned from their fall big-game hunt in New Mexico with glowing accounts of game conditions and of the scenic splendors as viewed in the Mogollon Mountains. As proof of their prowess as Nimrods, the trio brought home many pictures and a large bag of trophies, consisting of two bears, three antelopes, a badger, and much small game. One of the bears sought refuge from the hunters in a cave, and the intrepid Josey brothers advanced into the mouth of the cavern and administered the coup de grace to the snarling animal. The beasts did not afford an opportunity for the hunters to try their hand as ropers as planned originally.

TOM PAXTON, Standard Oil Company of Venezuela, Caripito, was guest of honor at a luncheon of the Houston chapter of Nomads October 24 at the Houston Club.

J. U. STAIR, 56, vice president of Shell Oil Company (California) died October 22, at Pasadena. Entering the oil business in 1903 as an office boy for Western Union Oil Company at Santa Maria, by 1909 he was superintendent, and until 1918 when the company was taken over by Union Oil Company of Delaware. He was vice president in charge of production when that company was absorbed by Shell in 1922. He rose through successive executive positions in the production department until appointment as vice president in charge of all operations in 1938.

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SERVICE FROM THE GROUND UP FOR THIRTY-ONE YEARS

Farish Strikes at Charges of Unfair Practices and Monopoly in Oil

[*Continued from Page 13*]

Compact states of common standards of production efficiency that will bring a closer approach to optimum production;

Development at the same time on the part of these states of better standards to assure equity as between owners of property in the same oil field and as between different oil fields.

"If both the oil industry and the proration authorities will move in the general direction which these suggestions indicate, and if at the same time the oil companies will adjust their posted crude prices more rapidly to such changes in basic conditions as we have seen periodically in recent years," he said, "substantial progress will be made toward smoothing out the present difficulties."

Asserting that management today lives in a "goldfish bowl" and is "always on the spot," Farish declared that any stockholder could raise questions at the annual meetings or go to the courts to prevent management from carrying out policies which he feared might hurt his interest.

Farish's discussion of management led Chairman O'Mahoney to suggest in his questions the desirability of laws to make management more responsive, as contemplated in his federal licensing bill, and prompted Senator King to remark that he did not approve of regimentation and standardization which, he said, leads to dictatorship, indicating that the committee itself is split on the advisability of federal control of corporations as a panacea.

Independent Makes Discoveries

Touching upon one of the problems given a major position on the committee's agenda, that of the position of the small man in modern industry, Farish declared that the so-called independent makes most of the new oil discoveries and, in response to a question by the chairman whether the necessity for deeper drilling did not make it difficult for the wildcatter to raise capital, explained that in many instances he secures contributions of land and "dry hole money" which enables him to drill without expense to himself.

While it is true that exploration has become a complicated, specialized art, he said, it is possible for small men to secure the services of reliable technical organizations at a reasonable fee.

Also, it is true, he said, that frequently the successful wildcatter sells his well to a major company, but he explained: "They wish to sell out to make a quick profit, to get the present value of future production immediately instead of waiting for 10 to 40 years. As soon as they have turned over a few of their wells and leases on that basis, they seek a new development in order to repeat the procedure."

At the same time, he pointed out, the small independent for the past 20 years has held about the same proportion of proved reserves and even increased his share in 1938 as compared with 1937.

On the other hand, Farish testified, the majors explore for oil and buy proven properties because, "if the major oil companies made no effort to protect their large investments in refining by maintaining crude reserves, they would be subject to serious criticism by their stockholders; if they made no effort to discover oil, they should be criticised as failing to serve the public interest."

His company, he said, does not produce its reserves as fast as some other companies, one reason being that it is making a genuine effort to use conservation methods. The Standard companies, he explained, "expect to be in business many years; it is to their advantage to have a supply of oil at as low a cost as possible for a long time to come."

"Another reason why the oil production of major companies is not so high in relation to their reserves as independent oil production is in relation to independent reserves," he contended, "is that in granting exceptions to spacing rules and in setting allowables in fields in which independent producers predominate, state regulatory bodies do not treat major companies as well as they do the independent operators. The small independent operators are numerous. They are more anxious to obtain their money now. As a practical political matter, the state regulatory bodies probably recognize the corporation can wait better than the people who have votes to cast. That is only human. When a major company is discriminated against too flagrantly, it can and does resort to the courts."

Independent Reserves Gain

Farish differed with statements made before the committee that the largest majors were acquiring the bulk of the proved reserves. It is true, he said, that the 20 largest producing companies own about 65 percent of the reserves, but of the additional oil proved up by discoveries, extensions and revisions of previous estimates in 1938, amounting to a total of about 1,200,000,000 barrels, the 20 companies obtained 600,000,000 barrels, or exactly half. Thus, he said, the independents, with less than 35 percent of the existing reserves, found or owned 50 percent of the oil that was added last year.

The chief complaint of the independent producer, the witness said, is that conservation restricts him from exploiting and producing rapidly all the oil that he has. However, he pointed out, this does not prevent numerous new operators from engaging in the business, which is proven by Texas figures showing an increase in the number of producers annually since 1930, during which period the number filing reports has increased from 1152 in 1930 to 3312 in 1939.

Several Clashes

Final hours of the hearing were marked by a series of exchanges between Chairman O'Mahoney and the witness, in which the latter was frequently backed up by Senator King, who had repeatedly indicated his disapproval of O'Mahoney's federal licensing panacea for the ills of industry.

These clashes came as Farish presented his views on the opportunities for independent enterprise in the transportation, marketing and retailing branches, and were precipitated by the witness' assertion that it is futile to speak of profits from pipe line transportation being used to subsidize marketing, because it is "like taking money out of one pocket to put it in another."

"The common carrier service of pipe lines—the services to others than the owners—is probably not over five percent, leaving little profit from outside to be used in other branches of the industry," he declared.

Chairman O'Mahoney questioned Farish at length regarding retailer charges of subsidized competition and of losses taken by the majors in marketing.

Market at Profit

"We do operate our marketing business at a profit," the witness asserted, "and we do not put anybody out of business. So far as I can interpret the record, the number of merchants that are put out of business in the petroleum industry is not five percent of the failures among the average industrial merchants in the United States."

"I do not think there is any question but of the people who are selling gasoline in the United States, a large percentage of them are only making a living," Farish replied. "They are not making a substantial profit."

Under further questioning he testified that of the approximately 25,000 of his company's customers less than 2200 are company-owned stations leased to operators, and admitted that, in the rush for outlets, major companies had probably used poor judgment in the acquisition of some sites. "We can make mistakes, too," he commented.

Pressing his questions about retailer complaints, Chairman O'Mahoney was told he was "giving undue consideration to the number of complaints and the character of complaints, which come from a very small minority." All complaints which come to Standard Oil are adjusted directly, he said.

O'Mahoney read from Farish's testimony last spring before the House committee considering the Harrington bill for the divorcement of pipe lines, showing that the Standard companies lost money on their marketing operations during the years from 1930 to 1935 and made profits thereafter. Under his questioning, the witness admitted that the two companies engaged also in production, transportation and refining made a profit on over-all operation, but insisted that O'Mahoney also put into the record his testimony before the House group explaining why marketing brought losses.

Against Pipe Line Divorce

Discussing the pipe line situation, Farish pointed out that "the actual building and owning of a pipe line system in itself is only a small part of the efficient operation and success of that pipe line system.

"The successful operation of a pipe line system," he said, "depends on two other factors, and in most instances the mere pipe line system in itself would be something like a railroad without tonnage."

The two important factors, he testified, are an active and aggressive pro-

duction at one end and a refinery organization backed up by a sales organization at the other.

"Do you mean to say that a pipe line system that should be owned and operated independently of any producing system or refining system would not of itself be likely to be profitable?" the chairman asked.

"I would say it could not be successful," Farish declared.

"You are aware of the demands that have been made for divorcement legislation," O'Mahoney continued. "Your testimony now is an argument against divorcement, is it not?"

"Certainly," the witness replied. "I am opposed to divorcement of pipe lines. I think it would serve no useful purpose to anybody."

O'Mahoney referred to charges of independents that rates were too high and that corrections were difficult to secure and that pipe line service was refused. Farish explained that rates are high because a pipe line is an expensive gamble and the owners wish to assure a return of their investment within the limited period of heavy traffic which follows the opening of a new field. He insisted, however, that his lines had never refused to move oil for anyone and pointed out that the trend in rates has been steadily downward.

"In summary," he said, "in the production of crude oil the opportunities for the small enterprise are substantial and there is no trend which suggests a decrease in those opportunities. In refining the combination of technological facts, which put a premium on large capital investment, and conservation, which minimized unbridled flush production, has reduced the opportunities for the speculative construction of small-scale refineries in the fields. Technical developments, however, notably catalytic cracking, may increase the opportunities for relatively small concerns in the future. In transportation, also, the requirements for large capital for the erection of trunk pipe lines and the purchase of tankers have definitely been a barrier to small concerns. More recently, however, other technical developments have opened the way for small enterprise to engage successfully in the transportation branch of the industry.

"In marketing as in production, the scales are tipped today in favor of the small business unit. All but a small fraction of the retailing of gasoline is done today by small business men. In the wholesaling of gasoline the independent business man holds a substantial position, and there is no persuasive evidence either that his business has been declining or that it will decline in the future.

"Thus it is clear that there are differing degrees of opportunity for small enterprise in the several divisions of this industry depending upon the economic and technical facts. The balance of advantage between large and small operation tends to shift from time to time as the economic and technical facts change."

Breaking in on Farish's testimony, Leon Henderson, executive secretary of the committee, told the witness that his testimony indicated that while the oil industry operated within the framework of the laws as they exist, it did not meet the modern concept of competition and indicated the belief that new legislation was necessary, although he did not profess to know just what form it should take.

Reviews Conservation Movement

The third and final day of Farish's examination was devoted chiefly to a discussion of conservation and proration, in the course of which he gave the committee an outline of the history of the conservation movement from its inception in 1924 by the late President Coolidge.

The witness denied that proration tended to fix prices, admitting only that it necessarily tended to control the supply of oil available and contending that the companies' posted prices followed the law of supply and demand.

On the other hand, he argued, rather than keeping the supply of oil down, proration tends to keep it up since, he said, "if withdrawals of crude oil from underground reserves were to take place under conditions which would reduce waste to the practicable minimum, the rate of production might fall short of meeting the current market demand by possibly 200,000 to 300,000 barrels daily."

So far as price is concerned, Farish took the view that changes on the supply side rather than changes on the demand side have been the most conspicuous causes of major fluctuations in the prices of crude oil in recent years.

"It is not to be thought, however," he warned, "that the price of crude under conditions of optimum production is likely to follow any steady or easily predictable course.

"On the assumption that optimum production initially would be below current demand, an approach through the proration procedures to such an optimum rate of output presumably might —if it happened rapidly—occasion a price advance. The normal sequence of events would be stimulation to oil finding activities, increase in the optimum production, and some decline in price. If these developments took place slowly — which is much more probable—they would go hand in hand with relatively little effect on price. Of course, the chance element in the discovery of oil, the effect of changing business conditions, and the uneven progress of various states and various oil fields towards the ideal of optimum production, all might combine at times to make price movements irregular and erratic."

Suggestions for Government

As a contribution for consideration by the committee, Farish presented suggestions as to what he thought the federal government might do to aid in solving the problems of the industry.

"It would be highly desirable for the Bureau of Mines to extend its work along the lines of helping to establish standards of efficiency in production," he declared. "Studies and reports of procedures and methods of setting up better standards should be made available to the states. Critical studies might even be made of the proration procedures in the various states in the light of standards considered desirable by the Bureau of Mines. The intent of these studies should be to help the states to overturn the rule of capture.

"The Bureau of Mines might also make studies of facts bearing on the problem of doing equity among different owners in the same field and among different fields.

"All this material should be made available to the state proration authorities. If necessary, the Bureau of Mines should have additional appropriations to cover the cost of making these studies.

"The Robinson-Patman Act needs to be clarified in several respects:

"1. It is now so drawn that it is very difficult for a company to know when it is violating the law.

"2. It should be made clear that a difference in the functions performed by a particular type of distributor is a proper basis for a price differentiation.

"Because costs, especially marketing costs, for particular commodities are so difficult to determine, the language of the act with respect to cost as a defense of price discrimination should be liberalized."

Following completion of his testimony, Farish stepped out of character as a representative of the oil industry and head of an oil company to warn the committee, as a citizen, against reaching uninformed and hasty conclusions which would bring about uncertainty.

Holding that the hearings afforded "a great opportunity for government to show business that public officials were more interested in developing facts and the full implications thereof than they were to obtain information to support some pet piece of legislation or some preconceived theory of economics or social reform," Farish declared the committee "has an opportunity to make a real contribution toward establishing mutual confidence and respect between business and government, an accomplishment which would have more effect in putting men and capital to work than anything else you might do.

"Your great opportunity also involves a great responsibility to show the public that you have listened with open minds; that you are anxious to see the patterns of American industry revealed as they are, and to judge those patterns in terms of their contribution to employment of labor and capital. In studying the patterns of American industry I expect that you will evaluate the services rendered to consumers by industry, especially the cost reductions which have made low prices possible.

"As a good Southern Democrat of long standing I am slow to approve drastic changes in government policies and principles. As a business man myself and also as a student of the reactions of business men, I urge you to consider the emotions and reactions of those who risk capital and employ labor. Do you realize that too drastic changes cause them to lose courage? Do you realize that once changes have been made—and there have been many in the past 10 years—stability of direction is essential to the renewal of courage? If government would show more stability of purpose and firm adherence to principle, one great, if not the greatest obstacle to the full employment of men and capital would be removed.

"I hope therefore that your committee will review the real impact of government policies on uncertainty and their relationship to the will and ability of business to employ both labor and capital more fully."

Oil and Louisiana Politics Become Further Interlocked

LOUISIANA'S present political campaign, scandal investigation and oil proration fight became more closely interlocked by developments of the week, and now are so closely related that only the mother of triplets could distinguish their faces.

Would Void Indictments

A new suit was filed attacking the state's oil conservation laws on the grounds they are in direct violation of the 14th amendment to the constitution of the United States, which prevents seizure of property without due process of law. Should this be proven, the indictments for hot oil violations now pending against former governor Richard W. Leche, hotel man Seymour Weiss, and Dallas oil man Freeman W. Burford automatically would become void.

The suit was filed by Glassell and Glassell, composed of A. C. Glassell and son, whose name had been mentioned previously in indictments handed down by the federal grand jury in New Orleans, and later in the extradition hearing held for Burford in Dallas. Glassell was connected with the now defunct Pelican Oil Company, owner of the Sexton Heirs lease in the Rodessa field from which the oil was obtained that led to the indictments. However, Glassell was not charged by the grand jury.

Lawyers Take State Jobs

Meanwhile, there were political repercussions in the George Lilly proration suit. John R. Land, Jr., chief counsel for Lilly, was appointed state campaign manager for Earl K. Long, who succeeded Leche as governor and is now seeking election in the January election. A few days later, Lilly's second-in-command attorney, Edward Heath, was appointed assistant state's attorney, to succeed some of the men ousted at a scandal hearing in New Orleans.

Another political angle to the Lilly case, other than the change of the attorney staff from the plaintiff to the state defense, developed at a court hearing last September 18 and was given considerable attention in a three-judge decision handed down last week, which granted Lilly an injunction preventing the state from enforcing the proration allowable given his Eola field well. The court ruled discrimination was shown when Lilly experienced a great deal of trouble in getting a permit to drill on a 23-acre plot, whereas W. C. Feazell was permitted to drill on an adjoining 17-acre lease. Feazell is a former state legislator, and was mentioned in the Burford hearing in Dallas as holder of a gas lease in the Rodessa field in partnership with former governor Leche.

Glassell Suit

The Glassell proration attack was filed in Federal District Court at New Orleans on October 21. A 50-page petition gave proration allowables in the Jennings field, Acadia Parish, as the cause for action. Glassell and Glassell claim they own 40 percent of the productive area, yet have only 25 percent of the production. Of the 19,135-barrel total allowable for the field, Glassell and Glassell are allocated 3585 barrels.

A secret meeting between the Louisiana Conservation Department officials and land, lease and royalty owners in the Jennings area was held last month, and an open meeting was scheduled for February 14. At the secret meeting, the pleas of Glassell and Glassell were heard, and other operators in Jennings objected to any increase for the firm.

At that time it was indicated that all parties interested in the matter would hold up any action until the open meeting was held. However, the Glassell suit was filed last week, and no other cause for action, except the allegation that the constitutionality of the state's oil laws were doubtful, was named.

Lilly Contentions Upheld

Meanwhile, a three-judge federal court was upholding George Lilly, Houston operator, in his contention that he had been discriminated against in the matter of allowables for the Eola field, Avoyelles Parish.

Lilly had filed suit several months ago. His petitions held four causes for action against the 29-barrel allowable set for his Haas Investment I well. One of these causes for action was the contention that the state's oil control laws were in violation of the constitution of the United States. This cause was taken from the pleadings at the request of the three judges before whom the case was presented on September 18. Petitions from several citizen groups organized with the avowed purpose of cleaning up the state's Augean stables had been presented to the judges.

In the judge's decision handed down October 25, one day following the appointment of Lilly's chief counsel, John R. Land, Jr., as Earl K. Long's campaign manager, the plaintiff was granted an injunction to prevent the state from cutting the allowable of his well below 214.9 barrels per day. The 214-barrel figure was arrived at as the top allowable for wells in the field when Lilly brought in his well last August.

In the decision, which was written by Judge Dawkins, it was pointed out that Lilly's allowable had been set at 61 barrels a day, and when he protested, the conservation commissioner (William G. Rankin, since resigned) had "arbitrarily reduced the allowable to 39 barrels."

The restraining order was labeled as "temporary" and a court trial was ordered on the merits of the case. No date has been set for the trial.

Drilling Permit Refused

In addition to the matter of allowables, it was pointed out by Judge Dawkins that Lilly had applied for a drilling permit for his 23-acre plot of ground, but was refused the permission. Lilly applied a second time but was refused again. This second application was submitted on June 12, and Rankin "illegally and arbitrarily" rejected the permit, although he knew that Lilly was "compelled to drill promptly to avoid forfeiting his lease." On June 13 Lilly spudded in his well to avoid said forfeiture, it was added.

For 22 days, the court declared, Rankin refused to grant the permit. Discrimination was shown, the court said, when on June 23 a permit was granted to W. C. Feazell, allowing him to drill on a 17-acre tract adjoining the Lilly lease.

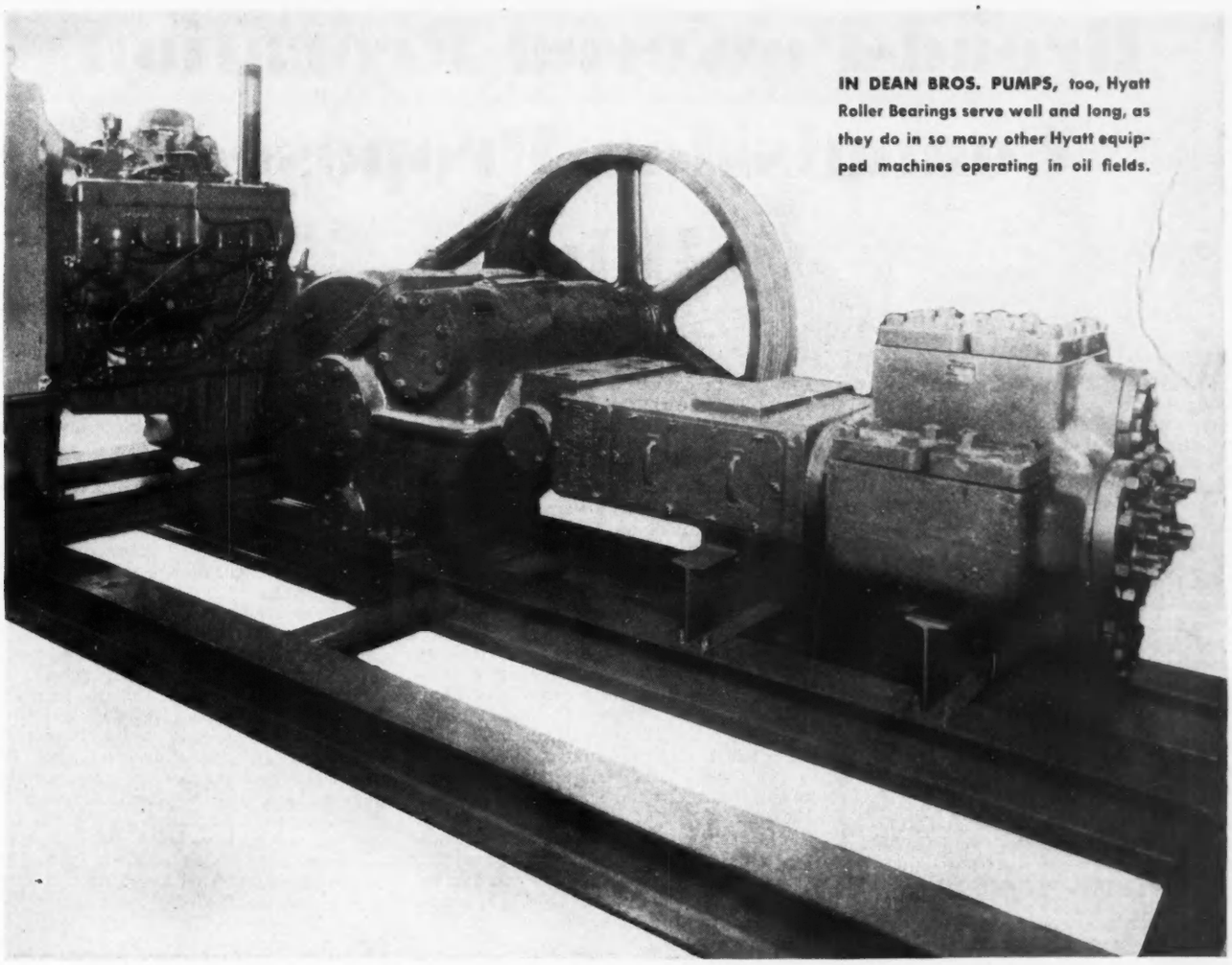
After Governor Leche had resigned, Lilly was given the permit on June 27. The well was completed on August 4, and was rated at 6000 barrels open flow, or 200 barrels on a quarter-inch choke.

Further, it was declared, Rankin, without taking into consideration the various factors and elements recited, arbitrarily set the allowable at 61.10 barrels a day.

Judge Dawkins pointed out that varying testimony offered by Lilly was not found in agrement with other testimony presented in the court, but those moot points will be heard at the trial.

However, the court pointed out that in any case when the commissioner tries to apply the gas-oil ratio in ordering a lower production, the "necessity must be clear and beyond question. Otherwise an abuse of discretion would result based on the mere 'ipse dixit' of the commissioner, rather than the conditions as they actually existed."

Robert R. Hardwicke of Fort Worth, representing the Amerada and Sid Richardson interests, aided the defense attorneys which were retained by the conservation department.



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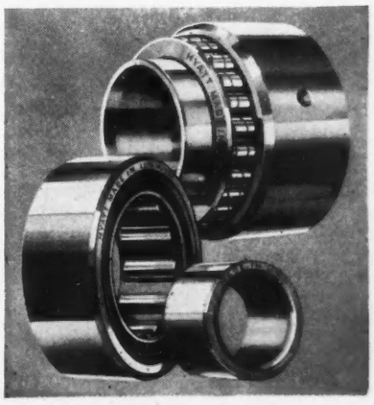

HYATT ROLLER BEARINGS

Broad-Powered Proration Commission Proposed to Illinois

WHETHER or not Illinois may adopt an oil conservation act, a question considered of paramount interest to the industry's general stability in view of the state's rapid production growth from 5000 barrels daily two years ago to around 325,000 barrels at present, may be answered in the near future.

A special session of the state legislature is expected to be called, and Governor Henry Horner has indicated he may ask legislators to consider oil control legislation. The most frequently mentioned dates for opening the session were November 14 and November 21.

Meanwhile, details of the bill submitted to state officials a week ago by three associations was made known. Lieutenant Governor John Stelle declared the measure a "proration bill and not a conservation bill," and that he would oppose it. As yet Governor Horner has not indicated whether the measure would be satisfactory with him.

The measure would establish a three-member commission, appointed by the governor, at annual salaries of $9600 each.

The commission would be empowered to prevent waste by making and enforcing reasonable rules, regulations or orders as may be necessary; to collect data, examine leases, check test and gage oil wells, tanks, refineries and modes of transportation; to examine papers, books, records and accounts of any owners or producers; to require drilling, casing and plugging of wells in such a manner as to prevent escape of oil or gas out of one stratum into another; to require making and filing with the commission any maps and reports showing location of all wells drilled for oil or gas and making and filing with commission logs and drilling and operating records or reports of such wells 90 days after completion or plugging; to make rules preventing drowning by water of any stratum or part thereof capable of producing oil or gas; to make rules and regulations designed to prevent fires and explosion, blowouts, seepage and caving to allocate production, distributing the market demand on an equitable and reasonable basis among wells; to regulate secondary recovery methods of oil, issue permits, require certificates of clearance or tenders in connection with transportation of oil, gas or any product, and to identify ownership of oil and gas wells.

The commission would be empowered to call hearings without respect to any matter within its jurisdiction either upon the initiative of the commission or a majority, or upon good cause shown by verified complaint filed by any interested persons with the commission. Action of the commission must be taken within 15 days after conduct of the hearing.

Attendance of witnesses, production of books, papers, records and other material necessary for any proceeding before the commission may be compelled by subpoena; but no rule, regulation or any change shall, in the absence of an emergency, be made by the commission except after a public hearing upon notice of 10 days. Suit for injunction by dissatisfied persons affected by the commission's orders may be filed only in Sangamon County (Springfield).

Should the commission fail to bring suit against persons allegedly violating conservation laws, the complainant may bring suit in his own name; and if, in such a suit, the court holds that injunctive relief should be granted, then the state shall be made a party and shall be substituted by order of the court for the person who brought the suit.

The measure would prohibit sale, transportation, and refining of illegal oil or gas.

Agreements for pooling to prevent waste between and among owners or producers owning separate holdings in the same pool can be authorized by the commission.

The commission, to prevent waste, would be authorized to establish a drilling unit for each new pool discovered after the act becomes effective, and in already productive pools where undeveloped areas are reasonably susceptible to application of spacing (providing that in pools or fields producing oil from less than 3500 feet, the unit for a sand horizon shall not exceed 10 acres and for a pool producing from a lime horizon it shall not exceed 20 acres).

The act would also provide that each well to be drilled on a unit or tract shall be drilled in the center thereof unless proper showing or reasonable necessity for a location elsewhere is made to the commission; that where there is a tract or parcel separately owned and not pooled, of less than the size of a drilling unit, the owner may drill only one well thereon to each producing horizon, provided the allowable production from the tract shall be in proportion to the allowable for the full drilling unit as the area of the tract bears to the full drilling unit of the pool.

A well in a pool producing from an average depth of 1000 feet or less shall be given a minimum base allowable production of at least 200 barrels of oil a week, and for a well in a pool producing from an average depth greater than 1000 feet the base allowable shall be increased 20 barrels per well per week for each additional 100 feet, provided the base allowables can be produced with a minimum of underground waste.

The commission could limit drilling of any additional well or wells in any pool discovered prior to the effective date of the act, which is not reasonably susceptible to the establishment of a drilling unit, to such wells as may be reasonably necessary to efficiently produce recoverable oil or gas. In the developed portion of any pool or field producing before the effective date of the act, the commission could allocate and distribute the allowable production for such developed portion of the pool upon a well basis among the producers owning developed acreage, subject to the minimum base allowable.

The act would declare every person engaged in purchasing oil to be a common purchaser without discrimination in favor of one producer as against another. If such person shall be unable to purchase all output of the pool, he shall purchase oil from each purchaser ratably in proportion to the allowable daily production.

Violations of the act or orders of the commission would subject the offender to a penalty of not to exceed $1000 a day for each day of such violation, and for each and every act of violation. An appropriation of $250,000 would be made to the commission to adminster the act.

Illinois output may have passed peak for year

Decreases in output in recent weeks have indicated that the Illinois Basin fields may be slipping in producing ability and that the state already may have established its peak for the year.

After having increased steadily, Illinois production reached a new high in the final week of September, but declines occurred in October.

The recent trend of Illinois production is indicated by the following weekly estimates of the American Petroleum Institute:

Week Ended—	Barrels Daily	Change from Previous Week
September 16	327,300	+ 5,800
September 23	338,750	+11,450
September 30	343,900	+ 5,150
October 7	330,500	—13,400
October 14	331,650	+ 1,150
October 21	327,700	— 3,950

It is understood that one large producer of Illinois crude no longer can meet daily refinery needs and has been obliged to resume shipments from Oklahoma. Such shipments currently are at the rate of more than 5000 barrels daily, it is said, to replace a similar amount no longer available from Illinois wells; and the movement will be stepped up above 10,000 barrels a day.

Meanwhile, completions of new wells in Illinois have been proceeding normally, indicating that the decline of the state output has not been caused by any unusual let-down in drilling. From September 16 to October 28, completions have averaged 80 per week.

THE WEEK'S NEWS SUMMARIZED

Legislation

President wants federal law only if state control fails

President Roosevelt last week gave unqualified endorsement to the Atkinson oil conservation bill passed by the California legislature and scheduled to be voted upon by the people November 7.

The announcement was made at a press conference, in response to a question as to his attitude in view of the fact that he was being quoted in California as in favor of the bill.

While it was known that the administration was in accord with the views of the proponents of the measure, and that representatives of the Petroleum Conservation Division of the Interior Department had visited the state when the bill was in course of preparation, there had previously been no official pronouncement. The Navy Department also is understood to favor the legislation.

Reports to Washington indicate that there is considerable controversy in California over the desirability of the law as enacted, and the question was designed to develop whether the President favored the Atkinson bill specifically, as had been claimed, or merely was in approval of any law which would lead to the conservation of California oil resources.

The president made it clear that he was in favor, as a general principle, of anything that would implement the efforts to take care of the conservation problem through the state compact method, and pointed out that he himself had suggested that arrangement at the meeting of the oil states representatives in Washington four years ago.

He pointed out that if the compact method was not successful, conservation would have to be handled by the federal government and said that he did not want the federal government to step into the picture unless absolutely necessary.

Legislation now pending for consideration at the regular session of Congress in January, would provide machinery whereby the government can enforce conservation measures in oil production in the event a state fails to do so.

The president expressed the belief that the state compact method has not been wholly successful, but added that those favoring that method think it can be made so.

Special Illinois session will study oil measure

Administration leaders last week were preparing to convene a special session of the Illinois legislature as early as possible to gain adjournment before Christmas. November 14 and November 21 were the most frequent mentioned dates for opening the session, which is expected to consider oil conservation and taxation legislation. Governor Henry Horner indicated oil control legislation would be included in the session call providing various factions in the state could come to some sort of an agreement on a bill. A severance tax is certain to be included, as funds will be needed to pay increased costs of old age assistance with the legislature scheduled to increase maximum payments from $30 to $40 a month.

Stelle Opposes

Lieut. Gov. John Stelle, meanwhile, predicted that the oil control bill submitted to the state administration by three producers' organizations a week ago, would "never pass." The measure is sponsored by the Illinois Independent Oil Producers Association, the Petroleum Association of Illinois and the Illinois-Indiana Petroleum Association.

Admitting he had not examined the measure but had heard it discussed at Springfield, the lieutenant governor, addressing a meeting called by the Illinois Oil Operators Equity Association, termed it "a proration bill and not a conservation bill."

"My position has not changed one bit on proration," he said. "There is a difference between proration and conservation and many people wro have accused me of changing my position on the proration subject have done so in error."

A threatened break in the crude oil price structure two months ago was termed by Stelle "a plan of the major companies to force proration" upon the state.

"They waged such a thorough campaign through advertising and news publicity they had the people of Illinois believing a drastic cut in crude prices was pending," he said, "and the fear thus created was transmitted to we officials in Springfield through requests for regulation."

The association, organized a month ago to oppose proration, adopted a resolution announcing steps for a program of "true" conservation guaranteeing "royalty owners a satisfactory price for oil, but one that will not create a condition of semi-private monopoly by surrendering control of the Illinois oil industry to the major companies."

Details of Bill

Details of the bill submitted to state officials a week ago were announced last week, but as yet Governor Horner has not indicated whether the measure would be satisfactory to him. It would establish a three member commission, appointed by the governor, at annual salaries of $9600 each. (See story, page 48.)

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Investigations

Monopoly hearing closes after 4½ weeks

After 4½ weeks of testimony, the Temporary National Economic Committee closed its investigation of oil industry conditions with a warning, from W. S. Farish, president, Standard Oil Company (New Jersey), against hasty adoption of any legislative measures that would disturb existing business relationships.

Farish, the last of approximately 40 witnesses, struck sharply at uncertainty of federal government policies and urged a declaration of their aims as an important business recovery aid. The Standard president also denied charges that the industry was controlled by monopoly rule of 20 companies, and that independent operators did not have a chance to success. (See story page 12.)

Present plans of the TNEC call for the filing of a report and recommendations for legislation sometime in February.

Federal procedure in offshore controversy studied

Department of Justice officials now are engaged in studies which may have an important bearing upon efforts of the Navy and Interior departments to secure federal title to California offshore oil lands, it was disclosed October 26 by Attorney General Frank Murphy.

Murphy admitted that the department is making a study to determine whether

the Federal Government can acquire Reeves field, located on an island built by the state in Los Angeles harbor, desired by the navy as an air base.

At an election last spring, the state voted to let the navy have the land, but city officials now are anxious to reserve any oil deposits which may underlie it.

The attorney general did not disclose what sort of proceedings were under consideration, but in other quarters it was pointed out that if the department brought suit asserting federal title to the land and was successful, it might serve as a precedent in dealing with the offshore oil lands.

Allowables

November output may exceed Bureau figure

Indications are that United States crude production in November may exceed the Bureau of Mines estimate of consumer demand. Eight of the leading states that practice production control have fixed allowables that in the aggregate fall but 23,231 barrels short of the bureau's estimate as compared with 66,000 barrels the previous month. Moreover this margin will be counteracted by Illinois, which does not have any proration laws, and which is likely to produce 25,000 barrels in excess of the liberalized demand allotment of 303,000 barrels given by the federal agency. Furthermore, California production has been running around 25,000 barrels in excess of its allowable. Consequently, U. S. output may be from 20,000 to 30,000 above the Bureau of Mines estimate.

A comparison of bureau recommendations and actual state allocations for November with those of October show that combined allowables for the 8 regulated states has swollen from 3,069,167 barrels, where it was 2.2 percent below the bureau total, to 3,104,769 barrels which is only 0.7 percent below the bureau's suggested quotas.

All regulated states, with exception of Arkansas, Michigan and Texas, have established conservation quotas that conform closely with bureau advice. However, California probably will continue to exceed its allowable in actual production.

Texas, through continuation of the shutdown system, has whittled its average allowable to a point 47,775 barrels below the bureau. While much of this margin will be made up by new completions and adjustments of field allowables during the month, this state will still perform the vital service of largely balancing Illinois' oversupply.

Arkansas, with an increase of 3000 barrels over October, has an allowable 21 percent in excess of the bureau, while Michigan has established a 12.7 percent excessive margin.

California allowable increased 700 barrels

California's allowable production for November has been set at 599,000 barrels daily by the Central Committee of California Oil Producers. October allowable was 598,300 barrels. The state's actual output, however, has been around 625,000 barrels per day. The November allowed production is 3000 barrels greater than the Bureau of Mines estimate of consumer demand.

The committee also voted to reduce the top allowable for more than 600 wells to 210 barrels daily each, a 10-barrel cut over the October allowable, and a 40-barrel-per-day drop since the top of 250 barrels daily per well was adopted in June. This measure was deemed necessary due to completion of 119 wells during October that had a combined potential of 117,000 barrels daily.

Texas November allowable under Bureau of Mines

Texas' November allowable production will be approximately 1,396,225 barrels daily, 47,775 barrels under the Bureau of Mines estimate of 1,444,000 barrels as the consumer demand. This compares with an allowable of 1,348,000 barrels on October 1, which subsequently was increased by the granting of higher allocations to a number of wells.

The state's total basic allowable on November 1 is expected to be 2,096,614 barrels, which is 24,570 barrels higher than the total basic allowable on October 14. This includes about 15,000 barrels allocated to new wells expected to be completed during November. This figure is reduced to a daily net output of 1,396,225 barrels by closing of fields on 11 days during the month. Fields are to be closed on November 1, 4, 5, 11, 12, 15, 18, 19, 25, 26 and 30.

The following fields are exempt from the shutdown order, and may operate (producing basic allowables) seven days each week: Chicon Lake, Eckert, Minerva, Rockdale, Somerset, Southton, Mission River, Charamousca, Midway, Sinton and Taft fields in Southwest Texas; Barbers Hill, West Beaumont, Boling, Damon Mound, Dickinson, Esperson Dome, Eureka Heights, Goose Creek, Gillock, High Island, Hamman (deep), Hitchcock, Old Hull, New Hull, League City, Lochridge, Mykawa New, Old Ocean, West Columbia, and West Columbia new fields in the Gulf Coast district; Corsicana (shallow), Currie, Mexia, Powell, Richland, Sulphur Bluff, Wortham, Wortham (shallow), Boggy Creek, Lone Star and Rodessa fields in East and East Central Texas districts; Big Lake, McMillan and World fields in West Central Texas; and Eaves, Garza, Hendrick, Howard-Glasscock, Iatan-East Howard, Leck, Shearer, Snyder, Taylor-Link and Tobarg fields in West Texas.

The next Texas state-wide proration hearing will be held in Austin on November 20. At that time, the commission will consider evidence upon which to base December well allowables.

Oklahoma increases allowable for November

Corporation Commission of Oklahoma set the state allowable for November at 429,000 barrels daily. This is the identical figure set by the Bureau of Mines and 4800 barrels per day greater than the October allowable of 424,200 barrels daily. This 4800-barrel increase will be allocated to the stripper well division as a reserve against fluctuation in production.

Louisiana increases November allowables

November oil allowable for Louisiana has been set at 258,994 barrels daily, an increase of 490 barrels over October and six barrels beneath the Bureau of Mines estimate of the state's consumer demand. North Louisiana was boosted 1377 barrels to 67,159 barrels, while South Louisiana was cut 887 barrels to 191,835 barrels.

Allowables for November Nearer Indicated Demand

(Barrels Daily)

STATE	Bureau of Mines Forecast of Demand	State Allowable Beginning of Month	Excess or Deficiency of State Allowable	Percent Excess or Deficiency	
				November	October
Arkansas	57,000	68,952	+ 11,952	+ 21.0	+ 17.3
California	596,000	599,000*	+ 3,000	+ 0.5	+ 0.6
Kansas	169,000	170,600†	+ 1,600	+ 0.9	+ 3.5
Louisiana	259,000	258,994	— 6	— 0.0	— 0.7
Michigan	63,000	71,000	+ 8,000	+ 12.7	....
New Mexico	111,000	111,000‡	.....	....	....
Oklahoma	429,000	429,000	.....	....	....
Texas	1,444,000	1,396,225§	— 48,775	— 3.4	— 5.8
Total Eight States	3,128,000	3,104,769	— 23,231	— 0.7	— 2.2

* Recommendation of Central Committee of California Producers.
† October allowable continued in effect till further notice.
‡ Estimated on basis of past conformance with Bureau forecast.
§ Daily average, considering 11 shutdown days and various exemptions.

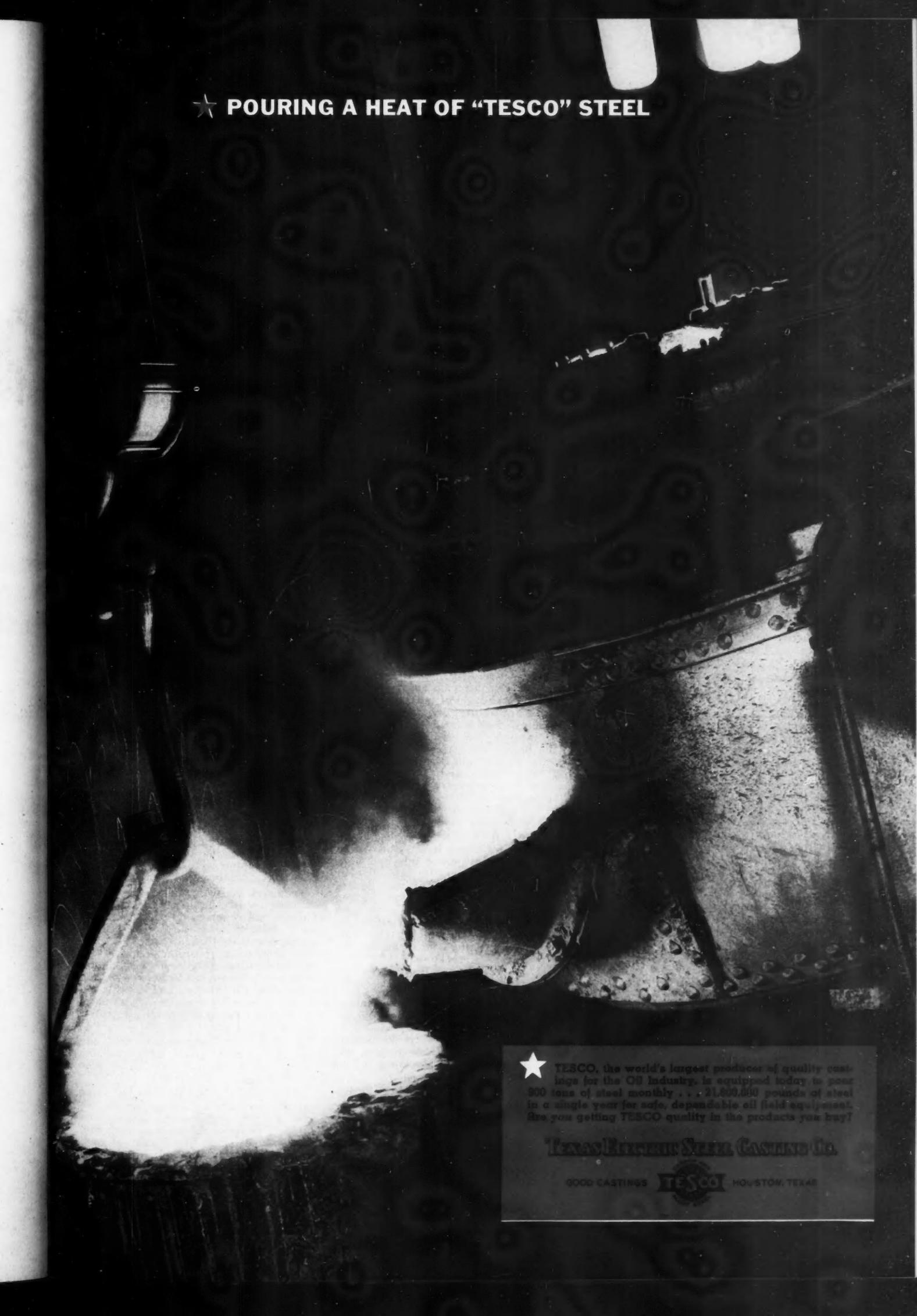
Courts

Louisiana proration clouded by new suit and injunction

Louisiana's perturbed proration situation became further involved last week, when an injunction was granted against the enforcement of a state allowable order and an entirely new attack against the constitutionality of the conservation act was filed.

A three-judge federal court upheld George Lilly's, Houston operator, contentions that he had been discriminated against by being given an allowable of but 39 barrels for an Eola field well, when it granted a temporary injunction preventing the state from cutting the well below 214.9 barrels daily. No date has been set for the trial.

In addition to the matter of allowables, the court ruling pointed out that Lilly had trouble in getting a drilling permit for his 23-acre tract, while a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well was permitted on an adjoining 17 acres.

The new suit attacking Louisiana's proration laws was filed by Glassell and Glassell on October 21. It alleged that the state's conservation act was in direct violation of the 14th amendment of the United States constitution, which prevents seizure of property without due process of law. Allowables in the Jennings field were the basis for the attack. Glassell and Glassell claim they own 40 percent of the productive area, yet have received only 25 percent of the allowed production.

Both suits involved several possible political angles (see story page 46), and in addition to their proration importance were attracting considerable attention for these reasons.

Court restrains Kansas allowable enforcement

The Kansas State Corporation Commission last week was temporarily restrained by District Judge S. S. Bloss from enforcing its October allowable for the Weathered pool of Cowley County. The action to obtain the order was instituted by Earl Wakefield, of Wichita.

The court set an allowable production for the pool at 1205 barrels daily, or 37,355 barrels for the month, as contrasted to the commission's order fixing allowable at 12,344 barrels a month.

Operators in the pool, numbering 29 wells, "shall not be prevented from production of a sufficient amount of oil to satisfy market demand," the court declared. The market demand for oil from the pool "can be produced without waste," in the opinion of the court.

Markets

Crude and refined oil markets remain strong

The industry's markets continue generally strong, in both the producing and refinery divisions, although no further important increases in prices have occurred.

The crude oil market is being bolstered by the firm demand for most products as well as by the strict curtailment of crude production.

Refined products remain in good demand, and supplies of some continue limited, particularly those of the lighter fuel oils. Markets are strong also for the heavier fuel oils and kerosene, as well as for aviation gasoline and lubricants, which have been in great demand.

Gasoline Situation

The gasoline market has continued less firm than the markets for other products, but prices have been holding, and are somewhat better than a month ago. For high octane gasolines there has been, in fact, some further improvement of prices. Several suppliers on the Atlantic seaboard last week were asking ¼ cent a gallon more than previously for 72-74 octane gasoline. But on the other hand, it was reported that some refiners and tank car marketers in the Middle West had shaded prices on 70-72 octane leaded gasoline.

Although gasoline stocks in the United States are considered larger than economically necessary, the inventories so far have not acted as a serious drag on the markets. However, it is possible that pressure has been held off temporarily by the comparatively mild weather so far this fall.

Expectations of foreign business also have helped to maintain firmness of the gasoline market, although the new war so far has hindered rather than stimulated exports, as shipping has been interrupted.

Crude Raise in Louisiana

Concrete evidence of strength in the crude market was given when Standard Oil Company of Louisiana, effective October 23, increased crude price postings for the Bunkie and Eola pools of Louisiana 10 cents a barrel. About 7500 barrels daily production was affected by the revision. The new schedule starts with 83 cents for crude below 25 gravity, provides a posting of 85 cents for 25-25.9 gravity, and ranges upward by 2-cent differential to a top price of $1.15 for 40 gravity and above.

Freer Shipping Expected

However, it is generally believed that the scarcity of tankers for trans-Atlantic movement will be alleviated within a few weeks, reports having persisted that convoys were being arranged for British and French boats, while some tankers of the Allied belligerents have been moving out of Gulf Coast ports. Some reports indicated that British and French tank ships were transferred from Oriental to Atlantic service, as one British boat arrived at Corpus Christi after an absence of two years. Such shifting of tankers is necessitated, apparently, by the fact that shipments of oil into the European war zone must be effected in the tankers of the belligerents. United States tankers are staying out of the war zones, and Norwegian and other neutral-country boats also are avoiding trans-Atlantic service, some of them having switched to South American trade. Several Italian boats have sailed for home ports lately with cargoes of oil.

On the Gulf Coast it was stated that substantial quantities of oils had been sold to foreign buyers for late October and early November lifting. Sellers partially confirmed this report, having revealed that they had made such commitments, and that they understood an alleviation of the shipping problem was in prospect, although no details of the shipping plans were known.

Gasoline Prices

U. S. motor gasoline at Oklahoma refineries ranged last week about as follows: 62 octane and below, 4½ to 4¾ cents a gallon; 63 to 66 octane, 4¾ to 5⅛ cents; 67 to 69 octane, 4¾ to 5¼ cents; 70 to 72 octane, 5¼ to 5½ cents.

Corresponding prices in the Chicago market were: 4¼ to 4¾ cents, 4⅜ to 4¾ cents, 4½ to 5⅛ cents, and 4¾ to 5⅜ cents.

In East Texas 60-62, 400 end point gasoline was offered for 4¾ cents a gallon.

Natural gasoline, grade 26-70, was selling in the Mid-Continent markets f.o.b. refineries at 4¼ cents a gallon, and sales were reported at the same price f.o.b. Breckenridge, Texas.

Kerosene prices f.o.b. Oklahoma refineries ranged from 3½ to 4¼ cents a gallon for the 41-53 water white grade, and from 3⅝ to 4⅝ cents for the 42-44 water white grade; and corresponding prices in the Chicago market were 3½ to 4 cents and 3⅝ to 4¼ cents.

In the Chicago market range oil was priced from 3⅜ to 3⅞ cents a gallon. The No. 1 white oil was priced from 3⅜ to 3¾ cents, and No. 1 straw at 3¼ cents. No. 2 straw was 3⅛ to 3¼ cents. No. 3 oil was 3 to 3⅛ cents. No. 5 oils were 65 cents a barrel. The No. 6 oil was quoted at 40 to 45 cents.

Pennsylvania crude price called low

Prices of Pennsylvania crude oil are "too low" from a standpoint of production costs, J. C. Martin, executive secretary of the Bradford District of the Pennsylvania Oil Producers' Association, said last week. He took issue with Noel Robinson, vice president of the Tide Water Associated Oil Company, who a week ago declared that he was opposed to the forcing up of market prices for Pennsylvania crude and lubricating oils to "unwarranted levels," with the European war as an excuse.

Martin called attention to the present price of $2.25 a barrel for crude oil with lubricating oils selling higher now than they did in 1937, when the price of crude advanced to $2.82 a barrel. Prices of lubricating oils, increased last July, did not result in a comparable increase in Pennsylvania crude prices, he said, adding "if the crude market price was raised another 57 cents it still would not be in the category of excessively high levels."

Washington mum on British convoys for Gulf oil tankers

Reports that the British government is sending armed ships into the Gulf of Mexico to convoy oil tankers to British and French destinations could be neither affirmed nor denied in official circles at Washington.

Inquiries of Navy and Coast Guard officials as to whether surface or air patrols had reported any movement of such vessels in or near Gulf waters were met with the response that any disclosure of the position or movement of armed ships of a belligerent nation would not be in conformity with the principles of neutrality and in violation of the rules of international law under which this country is pursuing a neutral policy.

At the state department it was said merely that no reports were available of any armed British ships in or near Gulf waters.

In view of the fact that several ships carrying oil and gasoline for British and French destinations have been sunk by German submarines, including the French ship, W. Emile Miguet, which left Corpus Christi, with 160,000 barrels of natural gasoline blended with

crude oil and was destroyed by the Germans October 13, reports of convoy activities were not unexpected.

Small increase in oil exports reported

First repercussions of the European war upon U. S. foreign oil trade were shown by the Department of Commerce October 26 to have been moderate and devoid any exciting increases over the corresponding month last year.

Crude petroleum exports for September, the department reported, were 6,924,000 barrels valued at $9,071,000 against 5,577,000 barrels valued at $8,166,000 in same month a year ago. Shipments of gasoline and other motor fuel totaled 3,590,000 barrels valued at $9,636,000 compared with 2,961,000 barrels valued at $8,112,000 in September, 1938.

Exports of gas and fuel oil were up to 4,222,000 barrels valued at $4,942,000 from 3,702,000 barrels valued at $4,832,000, and lubricating oil shipments were 988,000 barrels valued at $7,748,000 against 842,000 barrels valued at $5,783,000.

Stocks

Crude runs at new high and stocks at new low

Further expansion of refinery runs to a new all-time peak and an increase of crude oil production to an unusually high level were reflected in the latest statistics of the industry, covering the week ended October 21. The large plant throughput caused a further withdrawal from crude storage, which is at a 17½-year low, and resulted in addition of gasoline to storage as well as desired additions to stocks of both light and heavy fuel oils.

United States crude oil production averaged 3,771,550 barrels daily in the week ended October 21, having increased nearly 50,000 barrels from the previous week's rate; and at the higher level the output was more than 175,000 barrels above average daily market demand as estimated by the Bureau of Mines for October, and 16.1 percent greater than production in the corresponding week last year.

Crude runs to stills jumped to 3,650,000 barrels daily, a new high, in the week of October 21, after having broken all previous records the preceding week in averaging 3,600,000 barrels a day. The new rate was 13 percent higher than that in the comparable week last year.

Production of gasoline was increased about 15,000 barrels daily in the week of October 21, having totaled 12,182,000 barrels, or 1,740,000 daily.

With production larger, 859,000 barrels of gasoline went to storage, increasing stocks to 72,122,000 barrels, a level 6.5 percent higher than that of the corresponding time last year, although gasoline demand has been running only about 5 percent better than last year. Moreover, the stocks a year ago were materially excessive.

Inventories of gas oil and distillate fuels were increased 671,000 barrels to 39,358,000 barrels in the effort of refiners to build up supplies for the heating season, but the stocks at the end of the week were 2.8 percent smaller than a year previously, whereas demand has been more than 10 percent better.

An addition of 280,000 barrels to stocks of residual fuel oils was satisfactory, in view of the prevailing good demand, about 10 percent better than in 1938, induced by the present general business recovery. After rising to 115,060,000 barrels, the stocks of the heavy oils were, however, 8.6 percent smaller than at the comparable time last year.

Storage of crude oil in the United States came down 1,694,000 barrels more in the week ended October 14, in response to the exceptionally large refinery runs that had occurred in that week. The withdrawal left stocks at 229,870,000 barrels, a new low since April, 1922. The inventory is 17 percent smaller than that held a year ago.

Pipe Line

South Texas experiencing pipe line building boom

A pipe line building boom is apparent in South Texas with announcement of a series of feeder and trunk lines for the coastal sector to provide outlets to deep water ports.

Magnolia Petroleum Company will construct a gasoline pipe line from San Antonio to Corpus Christi, and a deep water terminal near the latter city. Contractors submitted bids on the pipe line project the past week. The line will comprise 118 miles of 4-inch and 20 miles of 6-inch pipe, with two booster stations. Welding is scheduled to commerce about mid-November, if pipe mills can make deliveries. This gasoline carrier will result in the abandonment of the firm's 50-mile 3-inch line that has been delivering motor fuels from its refinery at Luling to San Antonio since May, 1930. The latter is the oldest gasoline line in Texas.

Southern Pipe Line Corporation last week commenced construction on 23.75 miles of 6⅝-inch main from Bentonville-King field in western Nueces County to the company's Hunter Station in Saxet. Contract was awarded to Brown & Root, with completion scheduled before November 15. The company recently built a pump station and 55,000 barrels of storage at Bentonville-King.

The above company already has a pipe line connection into Reynolds field, several miles farther west, and is running crude through a 4-inch main. It also is to build a 4-inch line from Bentonville to connect with Alfred field of Jim Wells County.

Southern Pipe Line Corporation reportedly is contemplating immediate construction of 20 plus miles of 6-inch line from McCampbell, San Patricio County to a terminal on Corpus Christi ship channel. Southern Minerals Corporation, affiliated concern, recently acquired properties in McCampbell having a daily allowable of 2640 barrels and likely will increase production to near 5000 barrels per day. The Southern Minerals group also has a series of crude oil contracts and is attempting to increase sources of supply to fulfill those needs.

Valley Pipe Line Company, San An-

Trends of United States Production and Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1937:						
August 28	[5]3,731,450	3,425,000	309,506,000	66,997,000	112,111,000	
September 25	3,666,300	[5]3,455,000	307,974,000	65,620,000	116,472,000	
1938:						
March 19	3,433,550	3,080,000	306,380,000	[1]93,192,000	122,067,000	
August 27	3,388,500	3,255,000	285,029,000	71,754,000	29,747,000	117,179,000
September 24	3,251,150	3,220,000	280,278,000	68,605,000	31,183,000	119,285,000
October 29	3,237,500	3,145,000	275,824,000	67,590,000	33,690,000	120,029,000
November 12	3,243,250	3,180,000	273,394,000	[6]67,551,000	34,175,000	120,491,000
November 26	3,260,900	3,295,000	270,563,000	68,628,000	33,749,000	119,885,000
December 10	3,245,100	3,150,000	[6]269,509,000	68,587,000	32,068,000	118,711,000
December 31	3,201,450	3,115,000	273,024,000	71,695,000	29,082,000	115,741,000
1939:						
January 28	3,248,250	3,235,000	271,763,000	77,279,000	26,583,000	112,766,000
February 25	3,328,850	3,185,000	271,758,000	84,597,000	23,419,000	110,252,000
March 25	3,382,350	3,225,000	273,915,000	87,561,000	21,487,000	107,551,000
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,058,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
May 27	3,585,250	3,405,000	278,289,000	84,152,000	26,992,000	109,386,000
June 24	3,452,800	3,430,000	272,297,000	81,733,000	30,239,000	111,726,000
July 29	3,539,100	3,460,000	268,513,000	77,887,000	34,900,000	114,053,000
August 5	[3]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[10]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
September 30	3,658,200	3,560,000	233,023,000	71,168,000	38,081,000	115,466,000
October 7	3,435,850	3,505,000	231,564,000	71,152,000	38,549,000	114,397,000
October 14	3,713,800	3,600,000	[3]229,870,000	71,263,000	38,687,000	114,780,000
October 21, 1939	3,771,550	[3]3,650,000	.....	72,122,000	39,358,000	115,060,000
October 22, 1938	3,247,400	3,230,000	[4]277,001,000	67,695,000	[8]	[9]
Change in past year	+16.1%	+13.0%	—17.0%	+6.5%	—2.8%	—8.6%

[1] All time peak. [2] Peak for 1939. [3] Lowest since April, 1922. [4] Stocks, October 15, 1938.
[5] Peak prior to 1939. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.
[8] Available data for year ago include only stocks at refineries, and not at terminals, in transit, etc., except in California. Those stocks on October 21, 1938, totaled 32,252,000 barrels, and comparable stocks on October 21, 1939, totaled 31,360,000 barrels, or 2.8% less.
[9] Available data for year ago include only stocks at refineries, and not at terminals, in transit, etc., except in California. Those stocks on October 21, 1938, totaled 120,495,000 barrels, and comparable stocks on October 21, 1939, totaled 110,136,000 barrels, or 8.6% less.
[10] Lowest since October, 1922, due to the shutdown of six Mid-Continent states.

tonio, has announced plans for material expansion of its system in the Rio Grande Valley. A 4½-inch 25-mile main of welded construction will be laid from the South Ricaby field in central Starr County to Cuevitas field in the northern part of the county. This field, controlled by Sun Oil Company, has been running crude into a 120,000-barrel storage tank. Some has been trucked out.

The above company soon will build a 5½-inch main from Ricaby station about 45 miles to the northeast to include Rincon, Sun and Alta Mesa fields in Starr and Brooks counties.

Pipe for the projects has been ordered and will be shipped to Brownville by November 5. Work is to be commenced before November 15 as surveying is expected to be completed on rights-of-way before that time. When completed, the company will increase purchases in this area from 90,000 to 150,000 barrels per month and continue delivering the crude at Port Isabel to Coastal Refineries, Incorporated, which has contracts with firms on eastern seaboard.

Humble Pipe Line Company is laying a 4-inch line from Randado, some 20 miles to the south to the Colorado field, also in Jim Hogg County, giving this area its first outlet.

M. A. R. Pipe Line Company is to lay a 6-inch 45-mile line from Corpus Christi to Ben Bolt. The company will give this field an outlet to the Terminal Refining Company terminal, associated concern.

Continental Oil Company, which recently acquired the pipe line system of Crude Oil Companies, is to replace the line between San Diego and Corpus Christi terminal with 8-inch pipe. The company will use a part of the present 5-inch line for an extension to be built from the main line to Driscoll, Duval County.

Magnolia Pipe Line Company is rushing completion of an 8-inch line from West Ranch, Jackson County, to the company's Sealy station on the trunk line. This will give an outlet to the company's refinery at Beaumont. The company controls a large block of property on the West structure and is carrying on an intensive drilling campaign.

Lone Star building 57-mile 8-inch gas line from Buffalo

Lone Star Gas Company is clearing right-of-way for a 57-mile 8-inch natural gas line to extend from Buffalo, most southerly Woodbine field in East Texas, to Bryan. This unit will have a rated capacity of 12,000,000 feet of gas daily, operating under well pressure. It is being built primarily to augment the gas supply now available to Bryan from a smaller line built some years ago, and also to serve additional towns.

Welding work on the Buffalo-Bryan line will begin early in November. The company has recruited a construction crew to lay the carrier. The pipe will be insulated, using a primer coat, followed by a hot application, then wrapped with asbestos.

Humble to install cathodic protection

Humble Oil & Refining Company will install a cathodic protection unit approximately 1000 feet west and 750 feet north of the southeast corner of the land of Avy Oats Estate et al in the Reels and Trobough Survey, State of Texas. Another unit will be located approximately 1500 feet north of the southwest corner of the John Olsen tract in the Reels and Trobough Survey. These will be 10-volt, 100 ampere rectifier units.

Houston A.P.I. special train leaves November 11

A schedule has been arranged for the special train from Houston to Chicago for the annual meeting of the American Petroleum Institute that will enable Houstonians to attend both the Rice-Arkansas football game and the Rice-Texas A. & M. game the following week-end.

The train will leave Houston over the Missouri Pacific Lines at 6:15 p. m. November 11, immediately after the Rice-Arkansas game. It will arrive in Chicago at 6 p. m. November 12. The return trip may be made in time for the Rice-Texas A. & M. game by leaving Chicago at 11 a. m. November 17.

The trains will be completely equipped, carrying a deluxe lounge car with radio, drawing room and compartment Pullmans, etc.

United States Crude Oil Production

Estimates Compiled by THE OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (October)	State Allowable in Oct.)	BARRELS DAILY FOR WEEK ENDED Oct. 28	Oct. 21
TEXAS—				
Texas Panhandle			78,400	62,200
North Texas			77,250	90,750
West Central Texas			25,850	32,450
West Texas			218,850	246,850
East Central Texas			89,100	89,750
East Texas Field			409,600	497,050
South Texas			190,650	238,500
Texas Gulf Coast			218,200	241,450
Total Texas	1,444,800	1,360,563*	1,307,900	1,499,000
CALIFORNIA—				
Long Beach			43,700	43,800
Santa Fe Springs			26,200	27,100
Huntington Beach			26,900	26,700
Dominguez			16,600	19,200
Ventura Avenue			36,500	38,100
Midway-Sunset			50,200	51,500
Kettleman Hills			52,400	54,500
Wilmington			85,600	87,400
Others			267,600	283,900
Total California	594,800	598,300†	605,700	632,200
OKLAHOMA—				
Oklahoma City			95,425	104,100
Seminole Area			101,500	103,225
Fitts			23,425	20,325
Others			199,075	197,745
Total Oklahoma	424,200	424,200	419,425	425,395
LOUISIANA—				
North Louisiana			65,725	66,200
South Louisiana			196,200	195,300
Total Louisiana	260,300	258,504	261,925	261,500

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (October)	State Allowable in Oct.)	BARRELS DAILY FOR WEEK ENDED Oct. 28	Oct. 21
ILLINOIS—				
New Pools			326,250	329,500
Old Pools			8,750	9,050
Total Illinois	275,500		335,000	338,500
KANSAS—				
Burrton-Haven			10,900	10,600
Russell County			28,625	27,675
Silica			13,675	12,550
Others			134,000	124,025
Total Kansas	170,600	170,600	187,200	174,850
NEW MEXICO	114,200	114,200	113,350	110,250
EASTERN STATES—				
Pennsylvania Grade			78,100	77,300
Others, Eastern			26,050	26,250
Total Eastern States	103,300		104,150	103,550
MOUNTAIN STATES—				
Wyoming	69,000		64,500	65,250
Montana	16,500		17,000	17,100
Colorado	3,900		3,800	3,750
Total Mountain States	88,400		85,300	86,100
MICHIGAN	55,000		64,950	67,250
ARKANSAS	56,100	65,800	65,875	64,875
MISSISSIPPI			800	325
Total 8 Prorated States‡	3,120,000	3,059,267	3,026,325	3,215,765
Total United States	3,590,300		3,551,575	3,764,945

* Daily average at October 1, considering 11 days of shutdown, and various exemptions.
† Recommendation of Central Committee of California Producers.
‡ Texas, California, Oklahoma, Kansas Louisiana, New Mexico, Arkansas and Michigan.

WEEK'S DRILLING HIGHLIGHTS

Mississippi

Mississppi lease and royalty buying is among the most noteworthy field developments in the United States. Yazoo City is being played as a basin situation involving numerous counties, and the play is described as the early Illinois campaign reenacted.

Many leases are obtained for a bonus of $1 cash per farm, regardless of acreage, with annual rental of 10 cents an acre. But the lessee bears the burden of perfecting titles, which are reputed to be in bad condition.

Meantime the third oil well was completed on Tinsley Dome.

New Mexico

The new strike in western Lea County has been named Halfway and has drawn four drilling operations. A large producer is indicated on the east edge at Lovington.

Texas Gulf Coast

A near blowout indicated possibility of a new pay zone in a League City outpost. Aldine's second test, west of the discovery, missed the pay. Fairbanks' northwest flank test yielded gas.

Michigan

North and south areas of the Walker field were indicated as being connected. Traverse oil saturation was reported in a Cass County wildcat. Temple production was extended northwest. Two small oil producers among 12 wildcat completions are not calculated to cause much excitement until more drilling is done around them.

Comparison of Permits Granted for New Wells

STATE	Week Ending Oct. 28	Total this Mo.	Total this Year	Total this Date Last Year	1938 Year Total
Arkansas	2	12	189	204	247
California	30	100	883	1,018	1,146
†Illinois	120	120	120	....	....
Louisiana	33	125	1,159	1,069	1,214
Kansas	38	170	1,302	1,314	1,453
Michigan	34	130	1,199	771	953
*N. Mex.	16	81	186	....	....
Oklahoma	40	187	1,702	1,734	1,978
Texas	409	865	8,568	10,838	12,369
Total	721	1,670	15,257	16,948	19,360

† Data on Illinois prior to Oct. 21, 1939 not available.
*Data on New Mexico prior to Aug. 1, 1939 not available.

Southwest Texas

Small production found near Odem, San Patricio County, is expected to cause further drilling. A new 5500-foot sand at West was proven a blanket proposition. Texana, Jackson County, chalked up a mile southeast extension. Discovery of Yegua gas in Seven Sisters opened a large area to exploration. Rincon's crude producing sector received a major extension.

Oklahoma

The first dry hole was chalked up for Ramsey community block, 2 miles north of which a wildcat was reported running high. Chickasha got a new gas zone and McIntosh County a new gas pool. Ralston was defined on the east, but an Oklahoma County pumper opened a new field.

Kansas

Koblitz, Ellis County, was expanded ½ mile west by an Arbuckle lime well. North of Hannah, Butler County, a wildcat acidized Mississippi lime after oil rose in the hole. Failure marked an attempt to extend North Canton, but a Russell outpost is showing a small amount of oil.

California

An outpost at Greely has set casing to test below 11,000 feet after a few feet above had indicated probable failure. Record big equipment has been installed for a test going to the 13,000-foot level. Three wells on the north at Kettleman Hills are being deepened to Eocene.

Rocky Mountains

New work is remarkably active for this late in the season. Lance Creek has 16 rigs active. Wells seeking gas have been started in Utah and central Montana.

South Louisiana

Darrow got a 2500-foot extension and a new sand. Preparations are being made to test a deeper sand at Lake Mongoulois, and one was cored but not tested at Bateman Lake. Bay Baptiste's second test failed to produce.

Indiana

Northeast of South Griffin, Gibson County, a wildcat completing on pump made 200 barrels in 10 hours.

Summary of Wells Completed in the United States
Week Ending October 28, 1939

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total 1939	Total this Date 1938
Alabama	....	....	....	....	....	1	2
Arizona	....	....	....	....	....	1	....
Arkansas	5	3	....	2	1,332	198	189
California	18	17	....	1	13,753	889	1,057
Colorado	2	2	....	....	591	18	6
Florida	....	....	....	....	....	....	....
Georgia	....	....	....	....	....	1	1
Illinois	94	81	1	12	39,268	3,128	1,270
Indiana	9	5	1	3	1,506	211	124
Kansas	26	18	2	6	20,997	1,193	1,432
Kentucky	12	1	6	5	40	539	672
Louisiana	30	25	2	3	5,659	925	912
Michigan	41	25	3	13	11,377	1,242	796
Mississippi	....	....	....	....	....	11	14
Montana	5	3	....	2	140	126	67
Nebraska	....	....	....	....	....	1	1
New Mexico	16	13	2	1	7,375	549	448
New York	14*	14*	....	....	30	508*	581*
North Dakota	....	....	....	....	....	....	1
Ohio	15	6	7	2	121	802	798
Oklahoma	46	28	4	14	7,413	1,710	1,821
Pennsylvania	23*	20*	2	1	26	1,292*	1,833*
South Dakota	....	....	....	....	....	....	....
Tennessee	....	....	....	....	....	4	2
Texas	188	143	5	40	65,785	7,978	10,601
Utah	....	....	....	....	....	....	3
West Virginia	7	1	4	2	10	460	593
Wyoming	6	4	....	2	2,420	120	91
Total this week	557	409	39	109	177,843	21,894	23,214
Total last week	594	395	32	167	227,397	21,337	22,677
Total this year	21,894	14,933	1,592	5,379	14,583,599	....	....

* Includes water-input wells.

Oklahoma Fields

Ramsey community block's first dry hole recorded.

Large gas well opens new horizon for Chickasha.

Oklahoma Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Caddo—		
Yorkan, Lucas 1, se sw ne sw 3-5n-9w	1450	3450
Magnolia, McKenna 13, se ne se 11-5n-9w	2691	3344
Stephens, DeHeck 1, nwc se 21-6n-10w	66	3315
Carter—		
Ideal, Scroggins 14, sw ne se se 32-3s-3w	26	1146
Comanche—		
Truett, Fee 15, se ne sw se 26-2n-11w	*	229
Creek—		
Lease Investment, Darks 1-A, nw se nw 28-14n-10e (otd 3257 ft)	12	3354
Anthony, Muskogee 6, ne sw ne 9-16n-12e	¶3	1922
Kemp et al, Sellers 1, swc nw 30-17n-7e	*	1720
Strozier, Baker 2, se ne nw 20-17n-9e	*	2573
Willoughby et al, Sandlin 3, nwc ne 6-17n-10e	17	1735
Midco, Harvey 1, c sw nw 35-17n-10e (otd 1642 ft)	*	2905
Robbins, Noble 3, ne sw nw 35-18n-8e	15	2630
Garfield—		
Sinclair Prairie, West Kisner 43, ne sw nw nw 19-22n-3w	75	1196
Hughes—		
McGee, Mitchell-McGee 7, se ne nw nw 12-9n-10e	¶0.2	1197
Jackson—		
Fish et al, Mattie 5, nw sw sw 5-1s-19w	95	2430
Kingfisher—		
Trigg's Lankard 1, nec se 34-17n-6w	*	8330
Kiowa—		
Lewis et al, Rhyne 1, sec 29-7n-17w	*	1191
Lincoln—		
Portable, Nickell 1, sec 17-14n-5e	*	4053
Wilcox, Furry 3, ne nw ne 21-14n-6e	50	3105
Logan—		
Sinclair Prairie, Ford 1, sw nw se 12-17n-1w (otd 5087 ft)	440	5128
Jones Associated, Ridgon 1, c w½ ne se 29-18n-4w	*	6275
McIntosh—		
Pine, Marlin 1, 180 ft n c se ne 14-11-16e	¶4.5	2372
Muskogee—		
Foltz, Bartlett 6, se sec nw 16-14n-17e (otd 1400 ft)	10	1958
Okmulgee—		
Jordan, Walker 1-A, 310 ft s c ne 1-13n-11e	*	2062
Wise, Laskey 3, ne se nw se 17-13n-11e	10	3281
Conoquenessing, Haynes 1-A, nw ne nw 36-14n-12e	2	1658
Colson, Grayson 63, sw ne se 34-15n-14e	3	756
Osage—		
Midco, 2, c nw se 17-22n-8e	*	3009
Craig et al, 7, ne sw nw ne 8-22n-11e	*	1150
Norbla et al, 5, se swc nw 20-23n-10e	95	2536
Penney, 6, nw sw nw se 15-24n-8e	80	2380
Pawnee—		
Adamson, Purcell 4, se ne se nw 34-21n-8e	5	1727
Payne—		
Mid-Continent et al, Simpson 2, swc 7-18n-2e	10	4882
Hoagland et al, Kelley 1, sec sw 27-18n-4e	*	3905
Pontotoc—		
Stanolind et al, Greenan 2, nw se se 12-1n-7e	890	4618
Simpson-Roodhouse, Thompson 1, swc se 34-2n-7e	33	1884
Pottawatomie—		
Phillain, Garrett 3, nw se nw 28-7n-4e (otd 4146 ft)	1185	4272
Seminole—		
Skelly, Carl 2, nw se ne 14-7n-6e (otd 4597 ft)	115	3492
Winona et al, Wolf 1, swc se 18-7n-8e (otd 3112 ft)	10	2978
Phillips, Bethel 3, sw ne ne 7-9n-8e (otd 3274 ft)	8	2771

Tulsa.—The first dry hole within the community block for Ramsey pool, Payne County, was evident on the northeast line of production when Mid-Continent Petroleum Corporation cored white dry sand in first Wilcox from 4944 feet to 4975 feet at Ramsey 12, SE NE NW 18-18n-2e. A thick section of Mississippi lime placed the test structurally low. Thirty-four producing wells comprise the pool. The smallest is Simpson 2, a 10-barrel pumper which seemed doomed for a failure; the largest is Ramsey 2, a 15,240-barrel well.

Two miles north of this pool attention was focused on Kirk-Green-Way, Incorporated, et al's Doran 1, NWc SW 32-19n-2e. A thin section of Mississippi lime, 87 feet, put the well structurally above dry holes in the area. A core from 4650-55 feet contained 10 inches of oil stained Misener sand. The remainder was dolomite, presumably Hunton. One foot of this dolomite was bleeding, but had a weak odor. Woodford shale was topped at 4620 feet and drilling below 4695 feet.

A new deep gas zone in Chickasha gas pool, Grady County, was found in Sinclair-Prairie Oil Company's Charlson 4, NEc SE 22-5n-8w, which blew in for 43,600,000 cubic feet from 3940-67 feet. Coring was proceeding below 3968 feet.

McIntosh County Strike

McIntosh County recorded a new gas pool when W. B. Pine completed Marlin 1, S½ SE NE 14-11n-16e, 3½ miles northeast of Onapa gas pool, in sand at 2354-68 feet for 4,500,000 cubic feet.

The discovery well for Noble-Bugher, Cleveland County, was abandoned because of water trouble after a year's testing when W. A. Delaney plugged Bugher 1, SEc SW 12-7n-2w. It was drilled to 7672 feet and made 208 barrels of oil and 104 of water on the best gauge.

North of Noble-Bugher, 7½ miles, H & H Oils, Incorporated, was making hole at McAlister 1, NWc SE 30-9n-1w, east of Norman. Tests drilled in this vicinity contribute to the belief that this location is staked on a structural high. Offset acreage to the wildcat is held by Stanolind Oil & Gas Company, Magnolia Petroleum Company, Amerada Petroleum Corporation, Sinclair-Prairie Oil Company, Indian Territory Illuminating Oil Company, Gulf Oil Corporation, The Texas Company and Carter Oil Company, with Mid-Continent Petroleum Corporation holding adjoining acreage.

Ralston pool, Pawnee County, was defined on the east when Olson Drilling Company et al's Phillips 1, NEc 5-23n-5e, was abandoned at 3790 feet in Arbuckle lime. A slight show of oil was noticeable at 3542 feet in first Wilcox sand; second Wilcox was dry.

Oklahoma County's pool opener, Hall-Briscoe, Incorporated's, Thompson 1, SWc NE 28-13n-1e, 6 miles northeast of Nicoma Park pool, was placed on the pump and put 40 barrels of crude into tanks in 5 hours. The well sanded up in a short time and tubing was pulled to clean out.

Seven miles south of Elk City, Washita County, Continental Oil Company's Proctor 1, C NW 28-10n-20w, recemented liner at 14,491 feet and was drilling out cement. Depth is 14,540 feet, Pennsylvanian formation.

Company, Well and Location	Init. Prod. Bbls.	Depth
Stephens—		
Carter-Spears "B" 4, sw nw se nw 15-1s-5w	¶5.8	705
Magnolia-Harley 10, sw nw se ne 24-2s-4w (otd 400 ft)	7	485
McAllister, Wade "A" 5, sw se sw ne 11-2s-8w	*	2191
Tulsa—		
Reynolds, Filley 3-A, sw ne nw 2-17n-12e	8	1430
Jarret, Cummins 1, sec sw 2-18n-12e	5	1185
Detmer, Loyd 1, sec 11-18n-14e	*	1402

* Failures; † Junked; ¶ Million cu. ft. gas.

Forest City Basin activity—18 tests in four states

St. Joseph, Mo.—Mid-autumn finds 18 wells drilling in the Forest City Basin, in Missouri, Iowa, Kansas and Nebraska. For some leaseholders the year is turning and rentals are being paid, the indication being that most of the acreage held at a yearly toll of 25 cents will be retained. During October 5 new wells began drilling; 4 operators made locations and dug slush pits; 4 tests were abandoned—3 deep ones being dry and the fourth a loss owing to litigation; and 2 shallow gas wells were completed.

Arrangements are shaping up for 11 more tests, 1 in Kansas, 1 in Nebraska and 9 in Missouri. Since last March 14 dry holes have been drilled, all being regarded in the basin as deep and tapping Arbuckle, Viola, St. Peter and Hunton formations. Thirteen of them were in Missouri.

Ten deep tests are under way in Missouri, 2 in Adair and 1 in Schuyler counties in the northeast part of the state, and 1 each in the following northwest counties: Andrew, Buchanan, Clinton, Daviess, DeKalb, Holt and Mercer. Abandonments included 1 deep test each in Livingston, Adair, Harrison; 1 in Shelby County because of litigation, and 1 in Platte County, where Missouri Valley Gas & Oil Company is hunting shallow gas production.

In Platte County the Derby Oil Company made a farm-out contract with George A. Vincent to drill in its block 25 miles south of St. Joseph, in NE SW 16-53n-34w. The drilling contract was given to Jerry Ladd. The structure was mapped in 1932-33 by Milton M. Mershon. It was detailed in 1936 by Joseph Clair and F. C. Greene, the latter an assistant state geologist, and in 1938-39 the south half of Buchanan County and the north half of Platte County were both shot and cored. Pits are being dug for the test and a heavy rig will be moved in soon.

Location has been made in SE SE SE 12-60n-37w, Andrew County, by E. F. Neely, who was given 1800 acres by Derby Oil Company in whose 3000-acre block the test is to be drilled. Contract was awarded to Crow Drilling Company.

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Kansas Field Developments

Koblitz extended half mile by Arbuckle lime well.
Wildcat northeast of Hannah acidizes Mississippi.

Wichita.—Koblitz pool, Ellis County, was given a ½ mile extension to the west by Skelly Oil Company's Koblitz 1, CEL SE NE 22-12-18w, which topped Arbuckle lime at 3668 feet and drilled to 3677 feet. Oil rose 2800 feet up the hole and the test was shut in to allow installation of a tank battery. There are two wells in the pool.

A new pool was opened 1¾ miles east of Orth pool, Rice County. Fred Jones et al's Behnke 1, C W½ SW NW 25-18s-10w, drilled to 3214 feet in quartzite of basal conglomerate zone where oil filled to the top in 14 hours. Tankage was being erected. Previously this wildcat had a 3,000,000 cubic foot gas show in Kansas City-Lansing lime at 2950 feet. Eight-inch casing was cemented at 3039 feet.

Marlyn Oil Company's Hoard Ranch 1, a wildcat in SW NE NE 28-29-8e, 1½ miles northeast of Hannah pool, Butler County, acidized Mississippi lime from 2840 to 2849 feet with 1000 gallons. Oil stood 350 feet in the hole with an increase expected.

A swabbing test was being made at 3345 feet on C. C. Nelson Drilling Company's Malm 1, C NE NW 25-20-6w, west extension area of Barnholdt pool, Rice County. The hole stood with 450 feet of chat oil.

Kuhn and Funk failed to extend North Canton pool, McPherson County. Wilson 1, SEc NE 26-18-1w, had water in Mississippi lime at 2838-73 feet.

In Russell County, Phillips Petroleum Company and Continental Oil Company's Mai 1, NEc SW 15-13-14w, northeast of Russell pool, was testing 2 to 3 barrels hourly from 3324 feet, Arbuckle lime.

Prusa, Barton County, has proven a good reserve. Seventeen oil wells have a combined potential of 27,644 barrels daily, and one gas well completed for 28,500,000 cubic feet. Arbuckle, Kansas City-Lansing and Basal Conglomerate, have been proven productive since the field's discovery in December, 1938. Under state restriction no well is given a potential greater than 2750 barrels daily, although several have guaged in excess of 3000 barrels.

The Prusa structure is a definite subsurface high with the Arbuckle lime eroded at the surface crest. However, it is present on the flanks and has yielded the best production. Geophysically, the area is pictured as consisting of a series of small highs super-imposed upon a larger and more pronounced structure.

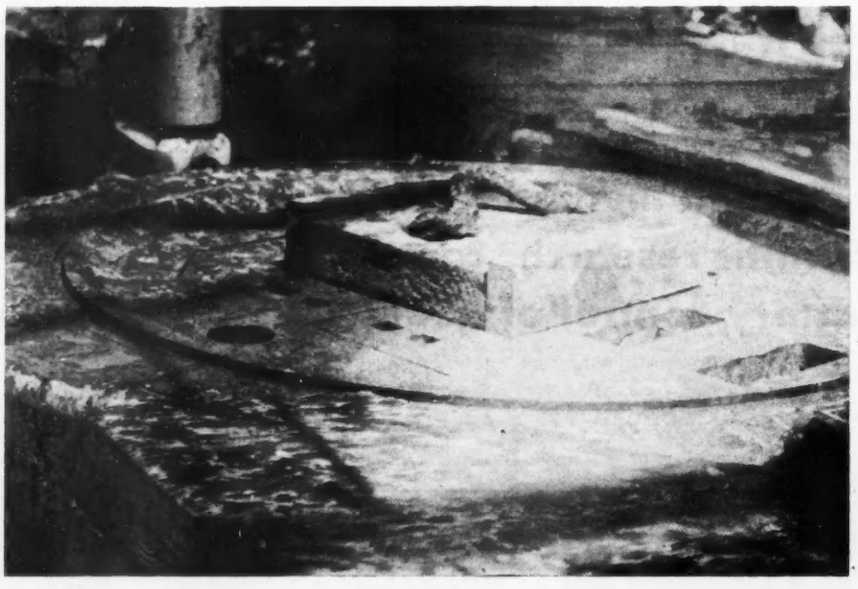
Two dry holes have been completed within the pool proper, and other failures have defined the north and east.

Rotary Aperture Coverage Advantageous

A properly constructed cover for rotary table holes offers several benefits, and because it may be built at practically no cost should not be overlooked by derrick floor workmen.

Such a guard will prevent accidental dropping of tools and other debris down the open hole, which often causes fishing jobs and consequently loss of time. A guard of this type also will prevent accidental injury to workmen, who might step into an unguarded opening.

Such a cover may be made of heavy timber, and fitted with a rope loop for ease of handling. When equipped with a heavy flange or underside projection that fits securely into the square aperture of the rotary, the guard may not become dislocated even if stumbled against or hit sharply, and can be removed only by being lifted sufficiently to clear the flange. Equipping the cover with an underside flange also prevents accidental flinging of the wooden piece across the derrick floor, in case the rotary be set in motion.



Oklahoma well spacing

Tulsa.—S. D. Butcher, J. Lloyd Carey and E. K. Carey have petitioned the Corporation Commission of Oklahoma for 40-acre spacing for the new Hunton lime area discovered by Mickish 1, SWc NW 36-10n-4w, northwest of Earlsboro, Pottawatomie County.

Kansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Barton—		
Iron Drilling Co., Krestin 1, c e½ se ne 20-17-15w	*	3595
Sinclair Prairie, Prusa 3, nec se 20-16-11w	2653	3284
Butler—		
Richmond, Riddle-Walker 1, c ne ne 3-28-4e	¶0.3	1504
Cowley—		
Cities Service, Scott 1, nec nw 21-21-4e	144	3385
Meade, Julia 2, swc se 16-33-3e	35	3213
Rosenthal, Olson "B" 1, sec nw 1-35-7e	10	2450
Ellis—		
Lario, Cress "C" 2, nw sw sw 13-11-17w	9480	3377
Greenwood—		
Barker, Gregg 1, sw nw se 35-25-12e (otd 1660 ft)	*	2041
Kingman—		
Skelly, Miller 1, 34 ft w cwl sw ne nw 31-27-10w	¶40.5	4074
Steffen "A" 1, c ne 31-27-10w	*	4315
Lyon—		
Bruce, Bruce 1, nwc 13-18-10e	*	2333
Marion—		
Loriaux et al, Bevan 1, swc se 21-17-4e	250	2406
Mendenhall et al, Bucher 1, nwc ne 28-17-4e	275	2415
McPherson—		
Bennett, Peterson 1, c s½ nw nw 32-20-5w	482	3375
Continental et al, Huxman 9, swc nw 29-21-1w	427	3280
Sinclair Prairie, Morehouse 8, se nw ne 4-21-3w (Salt water disposal)		4430
Rice—		
Continental, Warner 3, sw nw nw 6-19-7w	670	3258
Skelly, Bernstorr "C" 1, c s½ se ne 27-19-10w	711	3276
Russell—		
Sinclair Prairie, Rogg 7, c n½ nw se 29-14-13w	1027	2924
Hartman et al, Boxberger "C" 1, c e½ se nw 14-14-14w	*	3268
Billings, Holl (Boxberger) 1, nec se 21-14-14w (otd 3055 ft)	1918	3116
Transwestern, Polcyn 8, sw se se 10-14-15w (otd 3260 ft)	510	3266
Skelly, Rein 4, c s½ se nw 8-15-13w	910	3200
Coralena, Sellens 10, cwl sw ne nw 17-15-13w	1460	3180
Sedgwick—		
Cameron et al, Fields 1, nec nw 4-28-2e	*	3310
Woodson—		
O. K. O. Co., Hogueland 6, 255 ft s cwl sec 35-23-14e	35	1630

*Failures; †Junked; ¶Million cu. ft. gas.

Illinois Developments

Searching for fourth zone at Lake Centralia-Salem

Mattoon, Ill.—Kingwood Oil Company's Shanafelt 18, 614 feet from the north line and 108 feet from the east line, NW NE 20-2n-2e, in the heart of the Lake Centralia-Salem pool of Marion County, was drilling below 2900 feet on its way to what may be the first Devonian lime production in this pool which already accounts for more than half of the state's production.

Successful completion of the deep test, which is given excellent chances on the basis of preliminary surveys, would result in a flurry of drilling and materially boost the state's proven reserves. Production in the field is being taken from the Benoist and Aux Vases sands and from the McClosky lime. The Devonian is expected at about 3200 feet.

A closely watched Washington County wildcat, Comanche Oil Company's Zgonia 1, NE NE NE 21-3s-1w, was abandoned at 1800 feet. It topped the Tar Springs at 970 feet, the Glen Dean at 1095 feet, the Hardinsburg at 1120 feet, Cypress at 1275 feet, Weiler at 1290 feet, Paint Creek at 1375 feet, Bethel at 1477 feet, Aux Vases at 1520 feet, Rosiclare at 1627 feet, Fredonia at 1658 feet, and St. Louis at 1798 feet.

Eleven new wildcat starts were recorded during the week, along with six wildcat failures.

Illinois production supplies bulk of areas crude needs

Urbana, Ill.—With a steadily rising production from new fields, production in Illinois in September amounted to 60.6 percent of runs-to-stills in the Central Refining District, including refineries in Illinois, Indiana, Kentucky, Michigan and eastern Ohio, according to the state geological survey. This compares with production equaling 30.9 percent of runs-to-stills in January, or eight months ago. Crude produced in Illinois is marketed mainly in the Central Refining District.

Production in September reached 9,994,000 barrels, 428,000 barrels over the previous months and corresponding to estimated runs-to-stills of 16,500,000 barrels.

Drilling activity during September, while dropping from the previous month in number of completed operations, was scattered over 52 counties. The month's 322 completed wells, of which 247 were producers, dropped 52 or 13.9 percent from the 374 wells completed in August.

Discovery of the Stokes pool in White County brought to 43 the number of producing areas opened since January 1, 1937. An additional three areas, Mattoon in Coles County, Sorento in Bond County and Rinard in Wayne County, were opened but since abandoned.

Following is the status of the state's new pools:

Washington County—Cordes, 66 producers, 5 dry holes drilled within ¼ mile of production, 2 drilling, 5 rigs and 3 locations. Shelby County—Stewardson, 1 producer. Fayette County—Louden-Beecher City, 1130 producers, 65 dry holes, 10 drilling, 68 rigs and 13 locations; St. James, 49 producers, 4 dry, 2 rigs, 3 locations. Marion County—Patoka, 104 producers, 20 dry; Salem-Lake Centralia, 1335 producers, 51 dry, 13 drilling, 35 rigs, 5 locations; Tonti pool, 21 producers, 5 dry, 3 rigs; Sandoval Devonian, 10 producers, 5 dry, 5 drilling, 11 rigs, 1 location. Clinton and Marion Counties—Centralia, 551 producers, 42 dry, 2 drilling. Jefferson County—Cravat, 2 producers, 1 drilling, 1 rig, 1 location; Dix, 50 producers, 3 rigs, 3 locations; Roaches, 5 producers, 3 dry; Marcoe pool, 2 producers, 2 dry; Elk Prairie, 1 producer; Ina, 1 producer, 2 dry. Franklin County—Whittington, 1 producer, 1 rig. Coles County—Hutton, 2 producers, 1 dry, 1 drilling.

Clay County—Flora, 17 producers, 6 dry; Iola, 2 producers, 2 dry. Clay and Wayne Counties—Clay City, 350 producers, 18 dry, 2 drilling, 11 rigs, 1 location. Richland County—Noble, 194 producers, 33 dry, 1 drilling, 8 rigs, 4 locations; Dundas, 1 producer, 1 rig; Schnell, 4 producers, 5 dry; Olney, 36 producers, 11 dry holes. Wayne County—Clsne, 45 producers, 1 rig; Boyleston, 19 producers, 4 dry, 1 drilling, 1 rig; Aden, 4 producers, 2 dry, 4 rigs; North Aden, 53 producers, 7 dry, 1 drilling, 2 rigs; Enterprise, 38 producers, 3 dry, 2 drilling, 2 rigs; Mt. Erie, 1 producer; Barnhill, 27 producers, 3 dry, 1 drilling, 5 rigs, 2 locations; Goldengate, 4 producers, 1 rig; Leech Township, 6 producers, 1 dry hole, 1 drilling, 1 rig, 2 locations.

Edwards County—Grayville, 4 producers, 1 drilling, 1 rig, 1 location. Gallatin County—Junction, 4 producers. Lawrence County—Russellville gas, 25 producers, 6 dry, 2 rigs and 1 location; Wabash County—Griffin, 26 producers, 9 dry, 9 drilling, 11 rigs, 2 locations; Keensburg, 43 producers, 3 dry, 19 drilling, 38 rigs, 1 location; Mt. Carmel, 1 producer, 2 rigs. White County—Mill Shoals, 12 producers, 1 dry, 3 drilling, 10 rigs, 2 new locations. New Harmony, 2 producers, 1 drilling. Storms gas, 1 producer, 1 new location. Stokes, 1 producer, 1 drilling, 1 new location.

New York Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegany County—		
The Otsquago Corp., Pike farm, Alma	7	1430
McQueen Oil Co., Bledsoe farm, Independence	5	1326
L. H. Thornton, Agt., Shaughnessy farm, Willing	5	1280
Scio Oil & Gas Co., Angell farm, Scio	6	875
Sloan & Zook, McDivitt farm Bolivar	4	1070
Sloan & Zook, McDivitt farm Bolivar	3	1062
Allegany—Water Intake Wells		
Bradley Prod. Corp., Monitor farm, Alma	..	1318
Bradley Prod. Corp., Monitor farm, Alma	..	1310
Bradley Prod. Corp., Monitor farm, Alma	..	1306
Bradley Prod. Corp., Monitor farm, Alma	..	1314
Hardy & McBride, McBride farm, Alma	..	1335
Porge Oil Co., Anderson-Otis farm, Alma	..	1260
Adolph Vossler, Quick-Vossler farm, Alma	..	1390
Ford Oil Co., Frederick farm, Alma	..	1280

Ohio Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Athens County—		
Cross & McCune, G. Antle 2	15	377
G. & K. O. & G. Co., W. & V. Vandyke 4	5	383
Henry County—		
N. L. Stevens, Wells 1	15	1736
Knox County—		
Levin et al, Clutter 2	¶.50	2140
Licking County—		
Ohio Fuel Gas Co., Devevoise 1	†3.50	2622
Jones 1	†2.00	2590
Ray Penick, Eshelman 1	¶.36	2580
Peavy & Sons, Smith 2	*	596
Medina County—		
Preston Oil Co., Parent 34	30	357
Parent 35	55	403
Meigs County—		
B. & W. Gas Co., Haley 1	¶	760
Muskingum County—		
Atha Oil Co., Wescott 1	¶.50	3350
J. S. Evans 2	*	816
Stark County—		
White et al, Grubb 1	¶.70	4548
Washington County—		
Metcalf et al, Hendershot 1	2	1295

Tennessee Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Clay County—		
J. H. Overstreet, Kyle-Vaughn 2, 1 mile n Celina	*	....
Jackson County—		
Glenn D. Rose et al, Byers 1, 4 miles nw Gainsboro	*	1160

*Failures; †Junked; ¶Million cu. ft. gas.

Illinois Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Clay County—		
Pure, L. E. Stanford 1A	710	3068
Stanford O. & G. Co., Norton 1B	73	3155
Wiser Oil Co., Daly 7	950	3097
Clinton County—		
Farrelly et al, George Bergman 1B	*	108
Edwards County—		
Roach & Voyles, A. Lee 2	*	3392
John Pugh, L. V. Smith 1	*	2648
Fayette County—		
Gulf, Small 3	*	3375
W. Small 5	94	1614
Carter, McClain 7	512	1544
H. Durbin 8	956	1556
Geo. Pasley 4	84	1471
Estella Hopper 9	456	1548
N. M. Hopper 7	196	1546
N. M. Hopper 8	564	1570
McQuade 5	160	1492
Marie Thornton 8	144	1541
Nora Townsend 4	188	1582
Roy McKay 2	268	1515
Ira Boles 2	150	1526
M. E. Hogan 4	144	1498
Presbyterian Church 22-5	I	1580
J. B. Drees 22-3	I	1501
Raul Dunaway 3	750	1514
S. M. Dial 5	28	1538
H. Buesking 2-8	I	1588
Jack Smith 12-1	I	1588
Cynthia Hopper 22-6	I	1512
Texas Co., L. O. Wooten 5	D	1285
Shell, L. W. Sather 1	*	1632
Rudco Oil Co., Tucker-Evans 1	75	1560
Jarvis Bros., Sinclair 10	125	1395
Jefferson County—		
Oils, Inc., Mace 1	*	3046
S. L. Reinhardt, Inland Steel 1	*	3167
Lawrence County—		
Joe Kesl et al, W. Bryans 1	¶11.12	1091
Marion County—		
Menhall et al, Robinson 1	360	2989
Texas Co., E. Farthing 6A	2191	2023
E. Farthing 7A	581	1777
J. Friesner 9	3577	2000
J. Friesner 10	1498	1965
J. Friesner 11	1085	1962
N. Lee 17	357	2003
A. McCollum 14	3801	1968
A. McCollum 15	490	2000
A. McCollum 17	672	2002
T. Easley 14	252	2055
S. Shareshovech 5	1008	2012
S. Shereshovech 6	651	2069
S. Shereshovech 7	444	2060
H. MacRobert 6	1652	2030
L. Maxwell 4	1883	1993
L. Maxwell 5	644	2033
L. Maxwell 6	630	1994
F. Miller 8	1344	2040
S. Stonecipher 11	511	1757
S. Stonecipher 12	609	1794
Wiser Oil Co., Weems 8	425	2099
Cris Pierson, Langford 1	55	2090
Baldwin, Holmes 8	150	2080
Bates & Lichlyten, Tunster 2	625	2134
Booth & Absher, McMakin 4	60	2158
A. Sisson 1	25	2157
Miller & Murdock, C. Friedrich 1	*	2259
W. F. Keeley, Mason 1	*	3100
Harvey Oil Co., Kagy 4A	200	2147
St. Clair County—		
James McLlain, McNulty 1	*	1734
Wabash County—		
C. O. Everts, Bump 1	*	2463
Brown & Richardson, F. Kennard 1	220	2465
Burton & Duncan, McCleary 1	175	2460
Centralia Refining Co., Keensburg Cemetery 1	97	2448
Harry Fotiades, Legier & Gracy 1	250	2471
Lambert 1	300	2460
F. A. Nash 1	515	2464
Wheeler Community 1	350	2472
Roberts Bros., LaGier 1	350	2458
Lovellette 1	270	2473
Compton 1	225	2458
J. M. Roberts, Phebus 1	300	2454
Washington County—		
Comanche Oil Co., Zgonia 1	*	1800
Ohio, L. M. Miller 1	120	1300
Tom Kozuezek 1	104	1290
Lilley et al, Gill & Goodner Roadway 2	70	1283
T. Kozuszek 2	85	1283
Pinski 1	27	1285
Wayne County—		
Pure, Gid Miller 2A	752	3100
Loren Scrugham 1A	389	3095
Andy Bruner, Bothwell 1	135	3098
Bothwell 3	110	3079
White County—		
Nation Oil Co., Hammock 1	120	3285
Sarah Hammock 2	69	3260
H. H. Weinert, Miller 1	1200	3444
A. F. Anding, W. McIntosh 1	63	3254
Baldwin et al, McIntosh 1	202	3388
Riley & Lacy, J. Dauby 1	253	3260
T. F. Morrow, C. Cox 2	120	3250

"D" indicates Salt Water Disposal well.
"I" indicates Gas Input well.
*Failures; †Junked; ¶Million cu. ft. gas.

Kentucky Fields

Dry McClosky wildcat dims chances of nearby project

Owensboro, Ky.—Toomes & Smith's O. H. Parker 1, wildcat 2½ miles south of Beech Grove, Webster County, was abandoned at 1350 feet last week after drilling dry McClosky, dimming prospects for Mocarz Oil Company's L. S. Howard 1, 2610 feet from the east line and 3950 feet from the south line, Section 21-N-25, across the Green River in McLean County, which was drilling below 1250 feet.

Second wildcat failure of the week was L. L. Benoist et al's W. Mooreman 1, 1600 feet from south line and 1650 feet from the east line, Section 21-O-36, Breckenridge County, abandoned at 454 feet. In this county, Kimmell & Parks' Federal Land Bank 1, 1190 feet from the west line and 925 feet from the north line, Section 4-O-37, was a new wildcat start.

Six other wildcats, scattered over 4 additional counties, were listed among the week's new starts. In Butler County, Henry Ross' Forsythe & Neal 1, 140 feet from the south line and 4650 feet from the east line, Section 12-I-34, was shut down at 675 feet, and Hume & Steele's T. E. Carvile 1, 4420 feet from the north line and 2150 feet from the east line, Section 8-G-34, was rigging up machine. In Hancock County, Cripler & Coates' H. H. Hendrix 1, 1000 feet from the west line and 390 feet from the south line, Section 13-O-34, had casing set to 582 feet. In Livingston County, Lewis E. Maxson's Wells 1, 2300 feet from the west line and 225 feet from the south line, Section 23-I-16, was drilling below surface casing. In Todd County, Eubanks Brothers' B. M. Scott 1, 500 feet from the west line and 1200 feet from the north line, Section 13-D-29, was shut down at 290 feet, and A. A. Peard's Estes 1, 3700 feet from the north line and 1700 feet from the west line, Section 5-D-30, was a location.

Kentucky Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Breckenridge County—		
Benoist et al, W. Mooreman 1	*	454
Daviess County—		
Stewart, Snyder & Major Oil Co., Westerfield 2	40	1713
Master Oil Co., Johnson 1	*	1805
Floyd County—		
Columbian Fuel Co., Auxier 815-GW	¶.67	....
Hancock County—		
Lincoln Pet. Co., Shaw 1	*	286
Knott County—		
Kentucky-W.Va. Gas Co., Smith 580	¶.13	2969
Warfield Nat. Gas Co., F. Slone 4845	¶.10	2859
F. A. Kirk 4852	¶.02	2810
Magoffin County—		
I. B. Browning, Patrick 2	*	1103
Martin County—		
Ware et al, Cassady 1	¶.35	2586
Ohio County—		
H. Ogle, A. R. Ranfro 9	¶.05	339
C. Brown, B. Cullen 3	*	410

*Failures; †Junked; ¶Million cu. ft. gas.

Pennsylvania Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Bradford District—		
Grant & Mohan No. 3, Bing 486-7	1	..
Lincoln & Brink, Connelly	2	..
First Nat'l Bank, Pt. Allegany, Fee	5	..
Messer Oil Corp., Redfield	3	..
Tapp, Gallets & Buffington, Trs, Fee	4	..
Forest Oil Corp.	1	..
Bradford Transit Co., 9 wells	9	..
Bradford: Water Intake Wells—		
Mix Creek Oil Co., Fee	..	..
Forest Oil Corp.	..	..
Forest Petroleum Corp.	..	..
Niagara Oil Corp., 2 wells	..	..
Butler-Armstrong District—		
Hardly Able Oil Co., G. W. Wagner	*	..
Middle District—		
McComb & Boyd, Geisner	*	..
Bert Maitland, Lot 5553	¼	..
New York-Pennsylvania: Gas Field—		
Empire Producing Co., R. Donovan gas		..

*Failures; †Junked; ¶Million cu. ft. gas.

West Virginia Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Braxton County—		
Pittsburgh & West Virginia Gas Co., R. F. Stalnaker 7702	¶.70	1944
Calhoun County—		
V. W. Hamilton et al, T. S. Cuningham 1	10	2264
McCall Drilling Co., W. & S. Stump 1	*	2157
Kanawha County—		
Godfrey L. Cabot, Inc., Poca Coal Land Co. 1	¶3.30	2134
Lewis County—		
McCall Drilling Co., L. Brannon 1	¶.07	1680
Ritchie County—		
L. E. & W. H. Mossor, B. P. Adams 1	¶.50	2225
Wirt County—		
S. W. Douglass, A. R. Mackintosh 1	*	2300
G. Roberts, W. G. Monroe 1	*	2180

*Failures; †Junked; ¶Million cu. ft. gas.

Indiana Fields

McClosky oil found in test northeast of South Griffin

Evansville, Ind.—Apex Drilling Company's Prentice Julian 1, NE SE 26-3s-14w, southwestern Gibson County, was being completed on the pump as a McClosky well. Northeast of Somers & Egan's discovery well of the South Griffin area, it is just east of a dry hole drilled through the Cypress on the same tract by W. F. Lacy. Julian 1 made 200 barrels on an initial 10-hour test, alternately swabbing and flowing.

This company was cleaning out William Skiles 1, 120 feet from the north line and 120 feet from the west line, SW NE 18-3s-13w, on the northeastern edge of Griffin, preparatory to shooting the Cypress with nitro.

In St. Joseph County, K. V. Nilson's Kush 1, 210 feet from the north line and 260 feet from the east line, NE NW 8-37n-1e, topped the Trenton at 1495 feet and was abandoned at 1635 feet. It was in the extreme northern part of the state.

Sole wildcat start was Superior Oil Company's Mumford 1, 1650 feet from the north line and 2970 feet from the east line, NE 31-3s-13w.

Indiana Completions

Company, Well and Location	Init Prod. Bbls.	Depth
Gibson County—		
Hollandsworth & Bander, Boone-Cooper 4	651	2878
Lewis Prod. Co., Cooper 4D	285	2136
Thomas & Lacey et al, Cooper 5	250	2085
Fitzpatrick & Bander, Cooper 5	240	2875
Brown et al, Wilborne 1	*	2581
Hancock County—		
J. H. Snyder, Gates 1	¶	935
Posey County—		
Lewis et al, Hill 1	80	3115
St. Joseph County—		
K. V. Nilsen, Kush 1	*	1635
Spencer County—		
Damron Bros., Crowder 1	*	1707

*Failures; †Junked; ¶Million cu. ft. gas.

Increased Texas allowable pleas to be heard

The Texas Railroad Commission has scheduled several hearings to consider pleas for increased allowables. All hearings will be held in Austin.

A hearing for the Griffin field, Jones County, will be held November 2.

A hearing on the O'Connor field, Refugio County, has been set for November 3.

November 6 is the date for a hearing on the Jennings Ranch field, Zapata County.

A hearing has been scheduled for November 6 at Austin to consider application for a special allowable on The Pure Oil Company's Kroyetz 1, in the Dickinson field, Galveston County.

Texas permits jump to 409 for week

Permits for drilling 409 new wells in Texas were approved last week by the Texas Railroad Commission, 242 more than were allowed the week before.

Three permits were approved in the East Texas field including two in Gregg and one in Rusk County. From the remainder of the East Central Texas area, 10 locations were reported.

North Texas led the state with 87 permits, including 38 in Wichita, 14 in Archer, and 11 in Young County. West Texas held second place with 77 locations, including 21 in Yoakum and 19 in Ector County.

The commission permitted the drilling of 45 new wells in West Central Texas, with 10 in Callahan and 15 in Jones County. There were 55 permits listed from the Panhandle, with 21 in Gray and 17 in Hutchinson County.

Southwest Texas operators were allowed 76 permits including 16 in Duval and 11 in Jim Wells County, while Gulf Coast producers reported 56 locations.

Forty-acre spacing for Angleton field

An order entered by the Texas Railroad Commission last week provides for 40-acre spacing for wells in the new Angleton, or Anchor, field in Brazoria County. This will allow wells to be drilled 660 feet from the lease line and 1320 feet apart.

Three strings of casing are required. There must be 900 feet of pipe cemented to the surface, a second string of pipe 6900 feet long, or long enough to be set in the shale zone below the basal Miocene, and cemented 700 feet above the guide shoe. The oil string must be cemented 1000 feet above the shoe unless gas sands are encountered within 500 feet above this point, in which event the cement must be increased to shut off the gas completely.

The regulations call for straight acreage proration with 40-acre proration units. As much as 70 acres may be assigned to the final well on a lease.

Texas gas rates

The Texas Railroad Commission has scheduled a hearing for November 7, at Austin, to consider reduction of the rates charged by the United Gas Company for gas supplied to the town of Highlands in Harris County.

ARE YOU GETTING YOUR PRESENT ALLOWABLE?

You read a lot and hear a lot about low allowables, and the justification for increases in this or that field. That's all well and good, for everybody wants more production. But, there's another side to the picture. Are you getting your **present** allowable from pumping wells? After all, there are many wells not even producing their stipulated figure, because of down-time due to pumping unit trouble. If you find that this is your problem, then it's time to figure on Parkersburg Engineered Pumpers. We gladly refer you to any owner . . . and, the Parkersburg Representative in your field will be more than glad to take over your pumping problems.

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West Texas Fields

Ward County wildcat finds structure similar to Hendrick. Sand Hills completion makes 5678 barrels initial rating.

San Angelo, Texas.—Reef type of structure that is similar to the prolific Hendrick field, but smaller in area, has been uncovered in northern Ward County through deepening of a wildcat near the junction of large leaseholds held by Magnolia Petroleum Company and Gulf Oil Corporation. Completion of an oil producer from the porous lime section of the structure was assured last mid-week when Magnolia Petroleum Company's Sealy 2-43, SW NE NE Section 43, Block F, recovered 20 feet of oil saturation in coring to 2952 feet after mudding off 19,000,000 feet of gas found above 2910 feet. The well blew out while pulling drill pipe to land a liner because of open hole below 7-inch casing seat at 2597 feet, resulting in a daily flow of about 35,000,000 feet of gas with 30 barrels of distillate caught in separator in 12 hours. Pressure control equipment was moved in to try and recover the remainder of the stem.

The Ward County strike is 1¾ miles south by east of production in the Magnolia-Sealy pool, with two intermediate dry holes. The latter pool produces from the Yates zone, and the majority of the wells are pumpers. The new discovery logged top of brown lime at 2510 feet and first Yates at 2625 feet. The structure dips sharply to the west as the company's Sealy 1-43, NWc SW Section 43, abandoned in water at 3053 feet in July, 1935, is 169 feet lower on the brown lime. The company's Sealy 1-44, 1 mile north by west of the new prospect, is 91 feet lower on the Yates, and was abandoned in water at 3052-3161 feet, definitely placing an intermediate saddle. The new area must extend 3 miles south before other interests can share in the development.

Sharon, Scurry County, is rapidly becoming an important drilling center in the district. Independents are engaged in competitive drilling on proved acreage. This has forced some of the smaller units to dispose of their holdings because of financial limitations. An extra inducement to speed up development arose through raising well allowable from 35 to 112 barrels daily effective October 11. Magnolia Petroleum Company's McClure 2, SWc S½ SE Section 142, filled 1000 feet with oil from broken pay at 2383-2430 feet, then responded to a 815-quart nitro shot with a flow of 171 barrels of oil in 12 hours. A southeast extension is to be sought by Petroleum Producers Company et al on NW H&TC Section 123, Block 97. This 160-acre tract was subleased by Magnolia Petroleum Company for an immediate test and 1/16 over-riding royalty.

Good Well at Sand Hills

Northeast edge of Sand Hills, Crane County, recorded an outstanding producer when Humble Oil & Refining Company's J. B. Tubb 31, NWc PSL Section 7, had initial rating of 5678 barrels of 35.5-gravity oil after using 4000 gallons of acid in pay at 4320-4420 feet. It is a south offset to a recent extension completion. Gulf Oil Corporation's W. N. Waddell et al 11, SEc PSL Section 20, Block B-21, 3 miles northwest of this sector and southeast of shallower production in the McKnight pool, flowed 97 barrels of 29-gravity oil and 27 barrels of water initial, using input gas and flow valves. Production is from lower Permian at 4625-80 feet. Gulf Oil Corporation's McKnight 5, C SE PSL Section 1, Block B-21, encountered first water in Permian at 5498-5507 feet, but the volume declined in drilling to 5531 feet. It may be carried to the Ordovician.

Stanolind Oil & Gas Company's Blakeney 1-A, second lower Permian producer for the west edge of North Cowden, Ector County, swabbed 36 barrels of oil and 8 barrels of drilling water in 8 hours. The oil yield was reduced after cementing 5½-inch liner at 3857-5015 feet. Production is from Dolomite at 5120-60 feet. It may be reacidized, else given a light nitro shot.

The presence of a thick pay section on the north end of Seminole, Gaines County, was established by Amerada Petroleum Corporation's Auten 1, C SE SE W. T. Section 267, Block G, which was tested by stages from lime pay, topped at 5200 feet, with best saturation below 5286 feet. On preliminary test at 5315 feet, the well gauged 406 barrels of oil initial through ½-inch choke after using 2000 gallons of acid. It was deepened to 5341 feet, then reacidized with 1000 gallons with tubing packer at 5318 feet to exclude the upper pay. This 27-foot section yielded 15 barrels hourly on swab. The well was carried to 5372 feet for a flow of 241 barrels of oil in 6 hours after acidizing pay below 5342 feet, packer seat, with 1500 gallons. Final gauge of the full saturated zone, with tubing at 5360 feet, averaged 43½ barrels hourly on ½-inch choke, and 68 barrels hourly on a 2-inch casing outlet. Osage Drilling Company's Johnson-Ohio 1, 1 mile north, proved low and quit in sulphur water at 5491 feet. Trace of oil was recorded at 5425-67 feet.

Drill for Cedar Lake Line

Authorization of 4 tests for the Cedar Lake pool, northeastern Gaines County, by Stanolind Oil & Gas Company indicates that sufficient production to warrant a pipe line connection is to be sought immediately. The company is paying 23 cents per barrel for hauling of its discovery well output to the Means field, where the oil is delivered to Humble Pipe Line Company. The latter is committed to build a line into the field when production warrants, as it handles all of Stanolind Oil & Gas Company's West Texas crude on a common-carrier basis to the Ranger district, where consignments are turned to Stanolind Pipe Line Company. In addition to a west offset and a 3-mile northwest test, Stanolind Oil & Gas Company has made locations for a south and southwest offset to its producer.

West Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Andrews County (Means)—		
Humble, J. S. Means 67	393	4550
J. S. Means 68	1262	4517
Crane County (Wildcat)—		
Gulf, Waddell et al 11	97	4680
Ector County (Foster)—		
Atlantic, Henderson 1	828	4200
J. L. Johnson 1-E	657	4235
Broderick & Calvert, Witcher 12	1566	4176
Hilton Oils, Inc., Witcher-I.T.I.O 4	1967	4175
Stanolind, E. F. Cowden 26-A	1008	4160
E. F. Cowden 27-A	672	4180
E. F. Cowden 26-B	1438	4152
Ector County (Goldsmith)—		
Atlantic, T. P. Land Trust 8-C	717	4280
Gulf, Goldsmith 224	1744	4186
Goldsmith 225	1992	4202
Goldsmith 226	2524	4181
Ector County (North Cowden)—		
Stanolind, Roberts 18	584	4445
Trans-Southern Pet. Co., Holt-Landreth 1-B	191	4385
Gaines County (Wildcat)—		
Osage Drl. Co., Johnson-Ohio 1	*	5491
Howard County—		
Shasta Oil Co., Texas Land 10	1393	2830
Jones County—		
Algord Oil Co., E. Gillespie 1	4050	3277
Consolidated Oil Co., Cox-Hamilton 2	*	3292
R. L. Hines 1	806	3277
Humble, I. N. Irwin 4	718	2405
Wichita Prod. Co., Daughtry 2	90	1891
Jones County (Wildcat)—		
Hickok P&D Co.-Harry Reynolds 1, Williams 1	*	3385
Pecos County (Tobarg)—		
Childress Roy. Co., Smith-Sinclair 26	18	443
Smith-Sinclair 27	10	414
Pecos County (Yates)—		
Ohio, Yates 18-H	2232	1695
Taylor County—		
Sprotex Oil Co., A. L. Pittman 1	25	1740
Upton County (McCamey)—		
Lee Pet. Corp., Burleson-Shell 3	198	2432
Ward County—		
Gulf, E. W. Estes 124	993	2670
G. W. O'Brien 113	72	3064
Ward-Pecos Pet. Corp., Texas Cotton 4	261	1900
Yoakum County (Bennett)—		
Mabee et al, Willard 11	1266	5220
T. P. Coal & Oil Co., Bennett 24	959	5220
Yoakum County (Wasson)—		
Aloco Oil Co., Greer-Texaco 1	1380	5200
A. B. Smart-Texaco 5	726	5144
A. G. Carter-Continental, Willard 3-38	1083	5086
Danvers et al, Claywater-Amerada 5	811	5175
Honolulu Oil Corp., C. Wilder 2-804	1290	5160
Magnolia, Kendrick 7	1172	5140
Milhoan Prod. Co., Willard 5	1441	5160
Oil Dev. Co., Willard 1-761	2145	5215
Willard 3-803	1051	5215
Willard 5-803	1744	5215

*Failures; †Junked; ¶Million cu. ft. gas.

West Central Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Brown County (Wildcat)—		
Derrick et al, Harris 1	*	2128
Callahan County—		
Green & Owens, Anthony 2	10	294
Anthony 3	8	298
Kendrick & Van Zandt, Johnson 1	*	428
Wagnon et al, Isenhour 1	*	550
Warren et al, Huff 1	*	1712
Woodley Pet. Co., Hearn 1-C	*	845
Comanche County—		
Gallagher & Lawson, Robinson 1	*	683
Palo Pinto County—		
Gordon et al, Ringo 3	¶1.9	3680
Shackelford County—		
Fain-McGaha Oil Corp., Dawson-Conway 2	40	1497
Fortson & Taylor, McCown 3	1296	3207
Owens-Snebold Oil Corp., J. S. McKeever 6	1385	3197
Ungren-Frazier & Ambassador, W. H. McKeever 2	1420	3173
West & Honea, Martin 1	375	3193
Terry et al, Flippen 1	*	1025

*Failures; †Junked; ¶Million cu. ft. gas.

North Texas Fields

Twin drilling at Hull-Silk causing development increase. Two deep-lime wildcats in Archer County report oil show.

Wichita Falls.—Twin locations to the Strawn horizon at Hull-Silk, Archer County, is contributing to the gain in development in this second most active area in the district in recent weeks. Old wells in the 3800-foot upper pay are being given 75-foot offsets that will be carried to the more prolific 4300-foot zone. This also applies to more recent completions that yielded good wells in the shallower horizon. Helmerich-Payne and Blackwell Oil & Gas Company are starting three 4300-foot tests adjacent to flowing producers drilled on the discovery lease. The field accounted for eight locations for the past week and currently has 35 operations, including 23 active.

K-M-A deep area is maintaining its leadership with 8 authorizations the past week and a total of 56 operations; 19 in process of completion and 13 drilling with rotary between casing points.

Archer County has two deep-lime wildcats that registered oil shows the past week. W. B. Hamilton et al's Graham 5, mile west by south of Anarene, logged oil and gas showings in Caddo lime at 4957-77 feet, followed by 10 feet of dry lime, and was drilling at 4970 feet on a 5200-foot contract. Perkins & Collum's Falls County 183, situated in a shallow pool, logged top of Caddo at 4688 feet with nominal saturation reported in drilling below 4720 feet.

Montague County with two Strawn discoveries for the year, is to get a new wildcat on a block controlled by independents. Glenn Grimes and D. R. Feagin et al have assigned 400 acres of their block centering three miles north by west of Bonita and one fourth interest in the W. L. Admire 80-acre drilling site to Youngblood Foree and others for the drilling of a 4500-foot test. The latter have awarded contract to W. B. Omohundro, Wichita Falls.

United Producers Company and Continental Oil Company's West 1, southeast edge of the Bonita pool, eastern Montague County, cemented 7-inch pipe on top of oil sand at 3914 feet after coring to 3930 feet. It is lower than the two flowing producers in this zone.

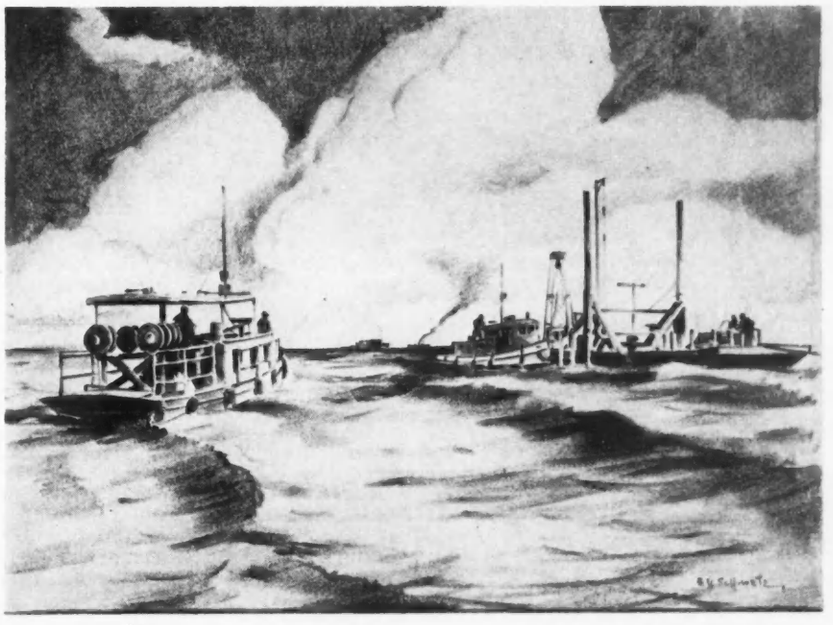
Completion of the sixth producer for

Stephens County discovery flows 180 barrels in 36 hours

Abilene. — Northeastern Stephens County recorded an oil discovery when T. G. Shaw et al's S. P. Stroud 1, SEc NW G. W. Newton Survey, A-128, swabbed and flowed 180 barrels of oil in 36 hours from Kisinger sand at 2594-2602 feet. A producer was indicated before cementing a string of 7-inch casing at 2590 feet. Tubing will be set to try for a natural flow. Stroud 1 is 3 miles south of an abandoned pool in Young County that produced from the same horizon.

Another prolific well was completed in the Dance pool, northwestern Stephens County. A. A. Horwitz and W. P. Oldom's Dance 2, J. Koehler Survey, A-96, flowed 656 barrels of oil through 1-inch choke in 8 hours after using 5000 gallons of acid in lime at 3552-82 feet. The partnership's Dance 1 opened the pool in April, 1938.

Danciger Oil & Refineries has started Davenport 1, NE NW NE Section 23, D&DA Survey, 2 miles west of Ovoca, Jones County, to try for production in the Palo Pinto lime near the 3300-foot level. Subsurface data gained from deep failures that partially circle the area indicates a small structure. Normal production trend to the southwest from the Avoca and Griffin pools has been eliminated by 6 Palo Pinto lime features, although A. H. Tarver et al's Barkley 1, SW SW SE Section 54, was drilling at 5380 feet, Hickok & Harry Reynolds' Williams 1, SEc Section 24, is the latest failure, having quit in water at 3368-85 feet after logging top of lime at 3363 feet.



Geophysical Exploration, Gulf Coastal Waters. From a lithograph by E. M. Schiwetz

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the deep area on the west edge of the Nocona townsite was awaiting a favorable wind before attempting to swab in. It was drilled by Thos. E. Nix and Rogers Bros. on the cemetery tract owned in fee by the city and perforated casing opposite the 4300-foot Strawn section after drilling to 4444 feet. Sunray Oil Company and Ramsey Petroleum Corporation's Burnett 1, south outpost, checked 30 feet low on the upper markers and is due to reach the upper pay early this week.

Continental Oil Company and W. H. Gant's Brown 1, southwestern Montague County wildcat, was drilling at 5490 feet with no show recorded below the 3700-foot level.

Want allowable increase for White and Baker

Cardinal Oil Company has requested a minimum allowance of 300 barrels daily for White and Baker field, Pecos County. At a hearing before the Texas Railroad Commission last week, operators said this would mean an increase of 105 barrels to be distributed among the seven wells.

A pipe line has been completed connecting with the Yates field.

Hearing on an application for an increase in the allowable for Henderson, Winkler County, has been set for November 1, at Austin.

North Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County (Hull-Silk)—		
Continental, McCrory-Wilson 2	1008	4312
Phillips, Moss 2	1400	4361
Southern Pet. Expl. Co., Johnson 3	928	4314
Clay County (Wildcat)—		
Lanning, Tr., Moore-Richolt 1, blk 9	*	1305
Shell, Scaling 1	*	5436
Cooke County—		
McDaniel & Beecherl, Weisman 2	110	732
Staley et al, Voth 3	306	1695
Cooke County (Walnut Bend)—		
Sinclair Prairie, Best 14	576	4919
Hardeman County (Wildcat)—		
Amerada, Rice 1	*	8258
Jack County—		
Bennett Oil Corp., Rankin 1	665	3164
Montague County—		
Falls Ref. Co. et al, Bouldin 10	10	816
Wichita County (K-M-A)—		
E. C. Oil Co., Mangold 16, blk 34	576	3810
Egger et al, Preston 5, sec 20	520	3964
Kimmell-Lee & Co., Love 1, lot 17	492	4035
Lewis Prod. Co.-Selby O&G Co., Mangold 8	1080	3841
Peckham et al, M. A. Love 2, lot 3	752	4080
Shell-Phillips, Preston 10-A	1072	4002
Wichita County—		
Douglas Prod. Co., Douglas 12-B	3	1406
Hanlon-Buchanan, Inc., Collins 1-B	*	878
Perkins & Cullum, Burnett 25-A, sec 1	10	673
Burnett 26-A, sec 1	7	673
Pois & Schulz, Foster 20-J, sec 2	*	1290
Wilbarger County—		
Vooheris & Davis 1, Waggoner Est. 1, sec 30	†	700
Waggoner Ref. Co., Waggoner Est. 28-AA, sec 14	55	1694
Young County—		
Trentman & Nunnlee et al, Quinn 3, sec 1974	513	2779

*Failures; †Junked; ¶Million cu. ft. gas.

Texas Panhandle Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Armstrong County (Wildcat)—		
Holmes-Newblock & Haley, E. J. Moore 1	*	4508
Carson County—		
Magnolia, Fee (tract 244) 62	289	3096
Gray County—		
Shell, Haggard 15	408	3250
Hutchinson County—		
Marlow Oil Co., Perkins 4-A	148	3085
Phillips, Erle-Thompson 1	226	3021
Moore County—		
Texoma Nat. Gas Co., Sneed 21-P	¶24	2900

*Failures; †Junked; ¶Million cu. ft. gas.

East Texas Fields

Chapel Hill gas area to get more drilling

Tyler, Texas.—Resumption of development in the Chapel Hill gas-distillate pool, Smith County source of high-pressure gas that is used extensively in the East Texas field, involves possibly 2 or more tests because of approaching lease expirations. The area is rated as an outstanding Trinity prospect for the Woodbine basin district, as Hunt Oil Company's Bradley 1, completed July, 1938, in Glen Rose at 7528 feet, averages about 250 barrels of distillate daily in supplying about 5,000,000 feet of gas daily for lease operation in the East Texas field. The discovery was completed with drill pipe cemented in the hole and did not explore the lower Trinity for oil production as originally scheduled.

Shell Oil Company has awarded contract for drilling Henry Campbell 1, northwest corner of 74-acre lease, Phillip Lively Survey No. 291, 2½ miles north by east of the deep producer. This lease requires production by November, 1940. Some of the owners of nearby short-term leases have pledged dry-hole contributions. Sun Oil Company and Shell Oil Company are negotiating for a joint test for H. W. Bacon's 138-acre tract, L. H. Dillard Survey, A-286, 1¾ miles southeast of the producer.

Geophysical data and subsurface control derived from Woodbine failures credit the Chapel Hill structure with embracing a large area. Performance of the discovery has caused lease prices to rise to such levels that drilling is preferred to the payment of demanded bonuses for lease renewals, or extensions.

The Texas Company's Scritchfield 1, 3 miles northwest of Bullard, Smith County, was drilling at 7830 feet in search of Trinity. It is situated at a low point in the Woodbine basin, having logged Georgetown lime at 6060-7265 feet.

The drilling of additional Trinity wells in the Opelika pool, Henderson County, is contemplated by Tide Water Associated Oil Company, Seaboard Oil Company and Humble Oil & Refining Company, joint owners of a small oil well and 2 prolific gas-distillate producers. Development is contingent upon royalty owners cooperating in the formation of drilling units that will apply only to gas-distillate production. The partnership is currently making a 10-day production test of the gas-distillate wells with the approval of the railroad commission. This may be a preliminary move toward installation of a recycling plant. No market is available for the gas, and such a plant offers the only prospects of gaining production revenue from the gas-distillate wells. Fifteen hundred barrels of crude produced over a period of months was purchased by Triangle Refining Company, St. Louis, Missouri, for 82½ cents per barrel, f.o.b. well, and the latter is also the test run, paying 95 cents per barrel. taking the distillate production during Production is loaded in tank cars at Opelika.

Trinity zones are the objective of all important wildcats underway in the district. In the Percilla area, northeastern Houston County, J. C. Wynn et al's Dorsey-Shell 1, M. Sallas Survey, was drilling at 6300 feet. Formation tester used in Woodbine at 5922-31 feet yielded salt water. It is preparing to drill to 10,000 feet, if necessary to fully explore the Trinity series. Peyton Brothers et al's Harris 1-A, projected deep test for the west flank of the Mexia field, was drilling in lower Woodbine at 3500 feet.

East Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Hunt Oil Co., Wooley 16 (53.15-ac)	1500	3771
C. Young 28 (125.95-ac)	1200	3755
McCutchin et al, Mason 2	2000	3618
Snetcher & Pittman, Cox 7 (17.97-ac)	3000	3640
Kilgore Area—		
Jenkins et al, Crim 2, blk 117	1200	3575
Jones-Doss Oil Co., Hagler 13 (30-ac)	4500	3558
Longview Area—		
Canadian Oil Prod. Co., Whittaker 6 (7.62-ac)	8000	3522
B. F. Phillips & Oil, Inc., Callum 8 (20-ac)	5500	3550
B. F. Phillips et al, Everett-Stanolind 1	720	3618
Stanolind-Tide Water, T. Snoddy 5-A (13.33-ac)	900	3587
Anderson County (Long Lake)—		
Hunt Oil Co., Hathcock-Gulf 2 (194-ac)	104	5333
Ellis County (Wildcat)—		
Beckner et al, Styles 1	†	905
Franklin County (Talco)—		
Humble, Penn-Humble 13 (700-ac)	411	4288
Freestone County (Wildcat)—		
Brothers Oil Co., Ball Est. 1	*	5524
Limestone County (Wildcat)—		
J. R. Bunn Drl. Co.-Willis, Gordon 1	*	1470
Nacogdoches County (Wildcat)—		
McDaniels et al, Seale 1	†	842
Navarro County (Flag Lake)—		
Topaz Oil Co., Trammel-Humble 3	*	3044
Navarro County (Wildcat)—		
Burke et al, Johnson 1	*	1400
Smith County (Wildcat)—		
E. B. James O.&G. Co., Lunceford 1	*	2083
Titus County (Talco)—		
Iowa-Payne Oil Co., Wilson 1	425	4322

*Failures; †Junked; ¶Million cu. ft. gas.

Abandonments balance new wells in East Texas

Kilgore.—The plugging of depleted oil wells in the East Texas field has been maintained on an almost equal volume with new completions since mid-April. Total wells listed on the official proration schedule reached the 26,000-well mark on the latter date, and have varied from a minimum of 26,006 to a record of 26,061 wells on August 23. Currently there are 26,053 wells on the schedule, including 180 off production.

Majority of the depletions are on the west and north flanks of the field. The Joiner sector has been the largest contributor because of wells going to water in the thin sand areas. Abandoned wells on the east side of the structure have been the most numerous on densely drilled leases situated east of Kilgore townsite.

Currently the field has 21 operations, including 8 drilling tests.

Webster hearing

At a hearing on the Webster field, Harris County, set by the Texas Railroad Commission for November 2, at Austin, the commission will attempt to determine whether operating rules in the field should be amended to allow a ten-acre tolerance for the last well drilled on a lease.

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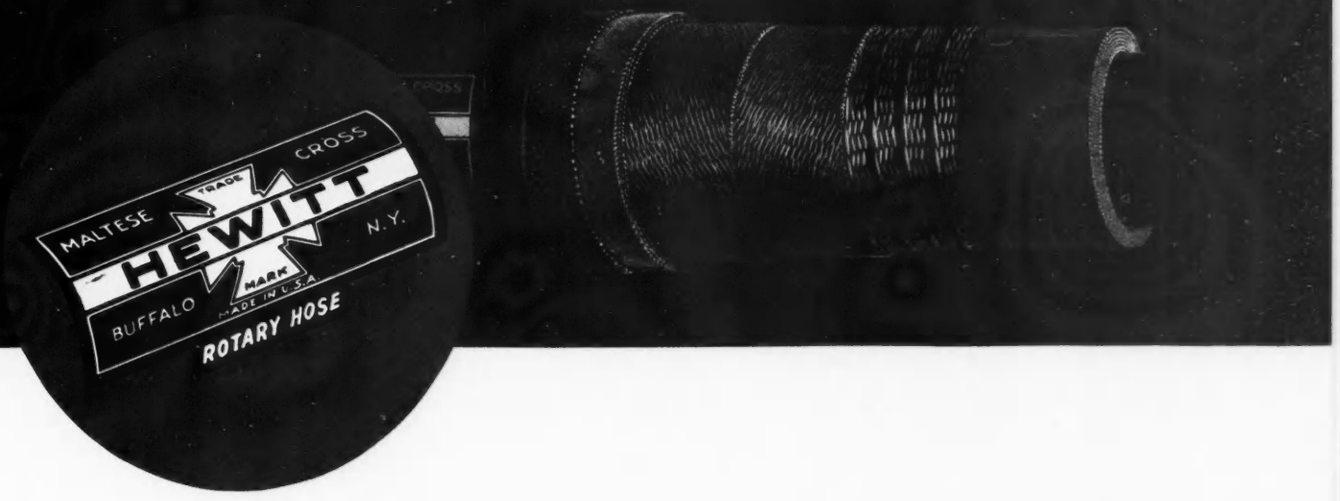

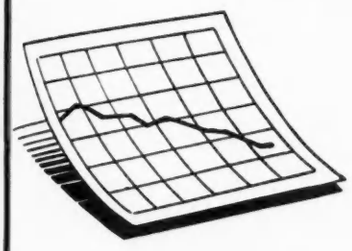

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Southwest Texas Fields

Seaboard's wildcat near Odem is small producer.

New 550-foot pay at West Proven blanket sand.

Corpus Christi.—Seaboard Oil Corporation of Delaware continued wildcatting successes on the lower Gulf Coast with opening a distillate field in San Patricio County. Although a small producer, it is anticipated that further exploration will result from completion of M. C. Smith 1, Juan Hart Survey, 2 miles west of Odem.

The well had hade a series of tests above 7295 feet, showing distillate at several points and salt water in others. On completion at 6995-7000 feet the producer gauged 45.6 barrels of 57-gravity clear distillate per day flowing through 3/16-inch choke. It showed 2650 pounds working pressure and a gas/oil ratio estimated at 61/400.

Reserves Enhanced

Magnolia Petroleum Company's West 20-A, 8500-foot southeast extension to the 5500-foot sand in West, Jackson County, was flowing 420 barrels per day on final completion through 20 perforations at 5525-60 feet. Flow was through ¼-inch choke. This test proves the 5500-foot sand to be a blanket proposition underlying all the structure thus far explored and materially enhances reserves of this district.

Moore & Ahern and Cron & Gracey apparently widened Texana, new distillate area in Jackson County, 1 mile southeast with the second well. Clement 1, Block 18, Clement Subdivision, was coring near 5600 feet, having shown the 5100-foot pay in both cores and on the electric log.

Having drilled to 9031 feet, Skelly Oil Company was preparing to complete Kunover 1 in a crude sand topped at 7949 feet. It gives promise of being the best producer in this zone.

Two failures on the Catahoula trend of Goliad and Victoria counties were recorded during the week. D. C. Matthews abandoned Swickheimer 2, a mile southwest of the Fannin discovery in Goliad. Houston Oil Company of Texas' Dietzel 1, Lot 29, 2823 feet south of the discovery, found salt water at 2287 feet, but was going ahead below 4500 feet.

W. Earl Rowe and Rodney DeLange were testing M. McNeill 1, a mile southeast of Wade City field in Jim Wells County. It showed for a gas well spraying a little distillate through perforations at 4785-90 feet. It had been reperforated at 4789-92 feet, following a squeeze job.

Sparta-Wilcox future in region to be known soon

San Antonio. — The coming week should bring definite information concerning the future of the Sparta-Wilcox trend of South Texas. The abandonment of one wildcat and the nearing of contract depth in several more have been outstanding developments of the past week.

After a slight show was encountered in a Wilcox sand at 6339-45 feet, Midway Oil & Royalty Company's Schumacher 1, Jack Survey, 3 miles north of Sublime in Lavaca County, was abandoned at 6851 feet. This well is supposed to have checked about 125 feet higher structurally than other wells in the region.

In Colorado County, Davis & Company's McLane 1 was at 9117 feet, coring for Wilcox sands. On Fordtran prospect, Wellington Oil Company and Jack Frazier's deep test on Booth land, Victoria County, had reached 8225 feet. At Yorktown, Purvis et al's Afflerbach, was close to 7000 feet.

Considerable attention is centering around the deep test of Tide Water Associated Oil Company on Bruni structure in Webb County. The well was drilling at 7810 feet. Production is hoped for around 8500 feet.

Sharp drilling increase along Balcones Fault

San Antonio.—Drilling activity along the Balcones Fault zone has shown a material pick-up during the past several weeks and it appears a greater number of wells will be underway within the next few days than any time during the past 2 years. The week brought the staking of 17 new operations, more than 50 percent of which are in wildcat territory.

Of particular interest, Edwards limestone and Austin chalk exploration in Williamson, Milam, Bastrop, Caldwell, Guadalupe, Bexar, and Medina counties gained as each reported one or more new locations. Drilling in this area had been on a constant decline for months.

Considerable new work is underway in older fields. In addition, a 20-well campaign soon will be started in Pearsall, Frio County, where more than 500 acres of production recently was acquired.

Seven Sisters Yegua strike opens big area for search

Laredo.—Mirando District had one new field opened and 2 new sand discoveries during the week to bring about the forecast of an intensified drilling program in Duval County.

Outstanding was the discovery of Yegua sand production in Seven Sisters to further line out deeper production in the Jackson trend. Wellington Oil Company of Delaware's J. F. Welder Heirs 2-G, west side of the field, is a large gasser from perforations at 3055-63 feet. The test had been carried to 3115 feet, having cored a gas sand in the Yegua at 3037-70½ feet. A new well is to be commenced slightly down dip in effort to obtain oil.

The Yegua discovery ties up a trend of Yegua production from Starr County through the Mirando district into the Slick, Goliad County, northeasternmost production in this zone, and opens a large new area to exploration.

Preparations were being made to again rework Standard Oil Company of Texas' Jack Casey 1, discovery well of Sejita, southeastern Duval County. The well flowed at the daily rate of 2,500,000 cubic feet of gas with a spray of distillate through 3/16-inch choke with 2150 pounds working pressure on the tubing; casing was sealed. Perforations had been made in a Jackson sand at 5334-45 feet.

Finds New Sand

Hiawatha Oil and Gas Company opened another producing sand in Southland, Duval County, the third for the area. The well encountered the new pay at 5353-65 feet and on a drill-stem test flowed pipe line oil with 165 pounds working pressure in 17 minutes. Casing was set on bottom and perforated for completion. The discovery sand at 5243-62 feet showed gas with some distillate on a drill-stem test.

J. H. Lynd may be opening a shallow area northwest of Calliham as P. Worley 1, Section 22, Roderick O'Boyle

South Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CORPUS CHRISTI DISTRICT		
Goliad County—		
D. C. Matthews, Swickheimer 2, (WC), blk 30, 1 mi sw Fannin field discovery	*	3512
Hidalgo County (Samfordyce)—		
R. S. Dean, Jr., Guerra C-3	*	2165
Rowan & Hope et al, Chapa 1	20	4005
Jackson County—		
W. S. Boyle, Mauritz 1 (Mauritz)	750	5645
Humble, Kubecka 6 (Cordele)	650	2692
Toney 3 (West)	1100	5540
Toney 4 (West)	1100	5598
Magnolia, West 20-A (West)	1000	5560
West 26-A (West)	1200	5543
Jim Wells County—		
Kilgore Developers, Mosser 3-A (Reynolds)	150	5580
H. J. Mosser, E. Perales 3 (Ben Bolt)	500	5480
Parr & Delaney Oil Co., Linday and Reed 1-A (WC), blk 21, Whitman sub	*	5740
Ramsey Pet. Co., Bankers Mortgage 1 (E. Alice)	*	5325
Texas Gulf, E. E. Miller 7-A (Reynolds)	600	5168
Kleberg County—		
Humble, Garza 1 (WC), blk 5, sec 37	†	6937
Lavaca County—		
Midway O&R Co., Schumaker (WC), Jack sur	*	6851
Live Oak County (White Creek)—		
Coquat, Holland & Smith, Bouham-Gayle 6	130	1480
Nueces County—		
Earl Fain, Bock 2-A (Minnie Bock)	450	3824
N. W. Hunter, Mantor 1 (WC) blk 23, Mantor sub	*	6263
Premont Pet. Co., Langham 1, sec 25	*	7145
Stanolind, Parr 1 (Minnie Bock)	225	3820
Texas Cons. Oil Co., Bock A-3 (Minnie Bock)	350	3821
Refugio County—		
Coronado Corp., Rooke 23 (LaRosa)	550	5910
Quintana, M. Williams B-4 (Tomoconnor)	1500	5928
San Patricio County—		
Allen & Morris, Baldwin 3 (E. White Point)	500	5652
Bay-Tex Oil Co., Davidor-Harris 2 (McCampbell)	350	7185
Diamond Half Oil Co., Timon 1 (WC), blk 2, San Patricio grant	*	6027
Easterwood Prod. Co., Cryer 2 (Plymouth)	625	5651
Plymouth, Heinman-Heff 1 (E. White Point)	650	5654
Hutto & Newman 2 (E. White Point)	650	5673
Mayo & Koonce 1-A (E. White Point)	500	5664
Seaboard, M. C. Smith 1 (WC), Juan Hart sur, opens Odem field, perf 6995-7000	¶2½ & 46	7295
Texas, Speer 2 (E. White Point)	450	5681
Wellington of Delaware, Welder B-2 (WC), Garza gr.	*	6105
Wood et al, Kellam-Roper 1 (E. White Point)	500	5670

*Failures; †Junked; ¶Million cu. ft. gas.

Survey, McMullen County, cored a sand in the Pettus zone at about 1000 feet and set casing.

Northeast of the above well, but in Live Oak County, A. P. Pohler's A. J. Turner 1 was being completed. It is bottomed at 899 feet with Pettus sand being logged 892-97 feet. It is located west of Whitsett in the Stephens Hays Survey.

Major extension recorded for Rincon crude sector

Edinburg, Texas.—Crude production was extended 18,500 feet to the southwest in Rincon, Starr County, October 24 when W. R. Davis & Company's T. B. Slick 1, C Section 528, was turned into tanks flowing at the rate of 140 barrels of crude per day through 5/32-inch choke. Pressures were 850 pounds on tubing and 1450 pounds on casing, with gas/oil ratio comparatively low. The well had been drilled to 4320 feet, but was plugged back for completion at 4170-90 feet, where 60 shots had been made.

The above well is about 2/3 mile south of the discovery distillate producer in the field and 18,500 feet southwest of the only crude well. It is possible that this is an entirely new sand rather than an extension.

The field, in the throes of preliminary development, received a set back in the abandonment of the Davis 1-A well on the same block. The well, in section 229 and offsetting the crude discovery on the south, found a series of oil sands to 4938 feet, plugged back and developed salt water at 3920-50 feet and was abandoned. Offsetting the crude discovery on the west, Sun Oil Company drilled Lyons and Stevens 1 to 4773 feet, where it was abandoned.

South Texas Completions

SAN ANTONIO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Bexar County—		
J. H. Lyles, Wolford 2 (LaCoste)..	18	1208
Caldwell County—		
R. R. Ogden, Lackey A-2 (Dale)..	*	2834
Weigand Bros., T. Briscoe A-9 (Salt Flats) .	350	2290
Gonzales County—		
Mudge Oil Co., T. G. Edwards 1 (WC), Pace sur	*	1599
LAREDO DISTRICT		
Duval County—		
Continental, Driscoll 40-A (Driscoll)	650	3357
Cox & Hamon, Cuellar Point 17 (Hoffman) .	80	2683
Peters-California 4 (Peters)	72	1895
Government Wells, Lundell 35 (Lundell) .	38	1542
Humble, White 15-B (Lundell)....	95	1536
Magnolia, Duval 41 (201), (Piedre Lumbre) .	300	2142
Wellington of Delaware, Welder 2-G (Seven Sisters)	¶20	3115
Jim Hogg County—		
K. D. Harrison, Trevino 2-A (Colorado) .	275	3062
Henshaw Bros., Tevnio 2-B (Colorado) .	150	3036
Starr County—		
W. R. Davis & Co., Slick 1-A, sec 229 (Rincon)	*	4829
Slick 2-B, WC, sec 528, 2/3 mi s of Rincon	* 500	4321
Howard Staggs, Ricaby 1 (N. Ricaby) .	10	1404
Sun Oil Co., Lyons & Stevens 1, Rincon (dd from 4382 ft)	*	4773
Webb County—		
Magnolia, Garcia-Arriba 2 (WC), Arriba, gr	*	4250
J. R. B. Moore, Billings 1 (WC), sec 13	*	2518
V. G. Schimmel, Benavides 2 (W. Cole) .	*	lcn.
Zapata County—		
Interstate Minerals, R. Lopez C-2, (Mirando Valley)	98	1813

*Failures; †Junked; ¶Million cu. ft. gas.

Texas Gulf Coast

To try to flow League City outpost through stem.

Aldine discovery well offset misses regular sand.

Houston.—An attempt will be made by Phillips Petroleum Company to produce Wimhurst 1, outpost at League City, Galveston County, through the drill stem after a near blowout at 10,969 feet necessitated plugging back to 10,630 feet to test what may develop into a new pay horizon.

At East Bay prospect in Galveston County, Sun Oil Company's State 1-176 cored a sand with an odor of oil last week around 7022 feet and cored ahead below 7093 feet for a sand similar to that producing at Caplan, Galveston County.

West of the discovery well at Aldine, Harris County, E. C. Hankamer's Hairgrove 1, S. L. Noble Survey, was abandoned below 7300 feet. It failed to pick up the sand from which the discovery well is producing.

Finds Wilcox Deep

Shell Oil Company is completing Kirby West 1 at Ace, Polk County, in the Wilcox formation about 100 feet deeper than other Wilcox producers. Perforated with 53 shots from 7828 to 7854 feet, it came in flowing 10 barrels of fluid per hour, 20 percent b.s.&w., through ¼-inch choke with a tubing pressure of 75 pounds and a casing pressure of 575 pounds.

About 1700 feet west and slightly south of Hamman Exploration Company's Darrington State Prison Farms 1, Sandy Point, Brazoria County, which indicated at one time it might open a new Vicksburg producing area, Jack Frazier and John Mayo have made location on the same property in the A. McFarland Survey, for a test to go to 9100 feet, or deeper.

Hebert & Smith are preparing to make a production test on Broussard Trust 1 at South China, Jefferson County. It was drilled to 7886 feet in oil sand, topped at 7878 feet; 7-inch casing was set at 7875 feet.

To Try at Lane City

In the Lane City area of Wharton County, where Humble Oil & Refining Company has drilled 2 deep dry wildcats, the company has made location for Lillie B. Henry 1, 466 feet northwest of the southeast line and 466 feet northeast of the southwest line of a 105-acre tract in the N. B. Williams Survey. It is a mile southeast of the company's Rogers 1, abandoned at 8252 feet.

J. F. Hutchins has made location for a 6500-foot wildcat on the Mackey prospect in Wharton County on farmout acreage of Magnolia Petroleum Company. A. P. Borden 1 is a mile south of Magnolia's Borden 1, abandoned at 6556 feet, and on a 160-acre tract in the H. Griffith Survey.

In the Cotton Lake area, Chambers County, J. R. Turnbull will test Kirby Petroleum Company 1, Chambers County School Land Survey, the coming week at 6439 feet. Turnbull cored 5 feet of oil sand from 6416 to 6430 feet and 2 drill stem tests failed. Casing run to bottom will be perforated.

On the southeast side of Cotton Lake, Humble Oil & Refining Company has completed and shut in Casey 1-C. Tested at 6460 feet, it came in for 6 barrels per hour through ¼-inch choke.

Frio Test Staked

South of Collegeport, Matagorda County, Pure Oil Company has made location for Woodhouse 1 on a 40-acre tract in Lewis DeMoss Survey, South of where Sun Oil Company completed a Miocene sand gas well at 4143 feet. Pure's well will be drilled down to the Frio.

On the northwest side of Fairbanks, Harris County, Union Producing Company has completed Whitehead-Rash et al 10 as a gas well in a new producing horizon. Casing was perforated with 72 shots from 6505 to 6520 feet and the well made 52,000,000 cubic feet of gas daily on open flow.

Two miles southwest of Booth in Fort Bend County, Superior Oil Corporation will attempt to open Vicksburg production in A. P. George 1, 4170 feet from the southwest and 2085 feet from the southeast line of the W. Martin League.

Texas Gulf Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Anahuac—		
Gulf, Wilcox 11	492	7125
Clear Lake—		
Humble, Humble-West Fee C-19....	120	5906
Fairbanks—		
Union Producing Co., Whitehead Rash et al 10	†52	6520
Friendswood—		
Humble, Beamer 31	552	6047
Goodwin B-5	495	6042
Keller 3	515	6046
Hankamer—		
Gulf, Boyt 25	42	4887
Hardin—		
Woodley, Green 1	84	7837
Hastings—		
Stanolind, Surface 10	581	6080
Humble—		
Deering & Burt, Burt 1	32	2800
Manvel—		
Texas Co., Cascio 2	138	5132
Belcher A-21	310	5140
Silsbee—		
Republic, Ferguson 1	240	6905
Sour Lake—		
Paul Fruge, Jackson 1	151	1951
Thompson—		
J. Blaffer, Davis 2	469	5407
Davis 3	531	5420
H. M. Naylor, Shanks 1	936	7872
Tomball—		
Humble, Doege 5	168	5595
Turtle Bay—		
H. L. Edwards, Sloan 1	36	6562
Withers—		
Texas Co., Broussard 16	120	5547
Pierce Estate B-40	64	5544
Thompson A-14	100	5544
Ft. Bend County—		
H. C. Cockburn, Dzierzanowski (Danzig) 1, Rosenburg area, E. Myers sur.	81	7743

*Failures; †Junked; ¶Million cu. ft. gas.

South Louisiana

Barataria looks like an oil field in Jefferson Parish.

New oil sand extends Darrow Dome 2500 feet south.

Lake Charles.—The California Company's Adams-Rutley 1, Section 2-16s-23e, Barataria prospect, Jefferson Parish, on drill-stem test of Miocene at 8204 to 8214 feet, recovered 3600 feet of oil and gas in 10 minutes. While making the test the well blew oil over the derrick. Hole had been drilled to 12,225 feet and was plugged back. Christmas tree is being installed and tubing run.

Barataria, 9 miles south of New Orleans, promises to be the second oil field for Jefferson Parish, the first being at Lafitte. Lafitte was the first field in the world to produce oil from 10,000 feet.

Barataria was worked with reflection seismograph instruments by The California Company in 1937 and 1938. The company has 15,000 acres in the area. Louisiana Land & Exploration Company, Fohs Oil Company and The Texas Company own leases on the prospect. Continental Oil Company is drilling a wildcat a mile from Adams-Rutley 1, on a farmout from Louisiana Land & Exploration Company. Tide Water Associated Oil Company is drilling a short distance southwest.

Humble Oil & Refining Company has extended Darrow Dome, 2500 feet south by completion of Gumble 16 from a new producing horizon. Perforated with 8 shots from 8259 to 8261 feet, it came in flowing 628 barrels of 29.5-gravity oil daily through a ¼-inch choke. Tubing pressure was 1500 pounds; gas/oil ratio, 970 to 1. Gumble 16, drilled to 8445 feet in shale, the deepest well ever drilled at Darrow.

The Texas Company is preparing to make a production test on State 7 at Lake Mongoulois, St. Martin Parish, at a level about 300 feet deeper than the established producing horizon. The hole was perforated with 72 shots from 9952 to 9970 feet and a 3-hour drill-stem test recovered 60 feet of distillate and recorded a 3600-pound pressure. Screen is being set. The well originally was drilled to 10,775 feet.

The Texas Company cored a new gas sand at Bateman Lake, St. Mary Parish, in School Board 2 at 11,169-79 feet. The hole was down to 11,398 feet at the end of the week.

Shell Oil Company's Michel 1, outpost at West Lake Verrett, St. Martin Parish, was drilling in shale below 11,487 feet after a drill-stem test at 11,288 to 11,309 feet in sand with an odor of oil showed 22 stands of mud and water and 59 stands of salt water in 15 minutes through ¼-inch chokes. Bottom hole pressure was 4600 pounds.

To Test Wilcox Again

On the southeast side of Ville Platte, Evangeline Parish, Continental Oil Company recovered salt water in Coriel 2 when the well was perforated with 24 shots from 10,230-45 feet, Wilcox, and salt water was shown. Perforations were squeezed with cement for another test in the same formation. The well also showed salt water up the hole in the Sparta formation. Coriel 2 is expected to make a producer in the Wilcox as it is believed to be higher than Haas 3, which was a Wilcox producer in sands at 10,055-85 feet. J. K. Hughes' Ortego 1, abandoned some time ago at 9100 feet, was down to 10,000 feet at the end of the week, and expected to pick up Wilcox oil sand at any time.

In the Catfish Lake area, Cameron Parish, Phillips Petroleum Company has announced location for a wildcat in its fee land. Fee 1 is in C SE Section 11-14s-6w, in the area where Humble Oil & Refining Company drilled two 10,000-foot dry holes. Ash Robinson drilled a deep well in the area on the shows of oil encountered in the Humble's tests. Phillips worked the area with reflection seismograph in 1939. Humble dropped most of the acreage in the area after drilling the dry wildcats.

In the Bay Baptiste area, Terrebonne Parish, where Fohs Oil Company has completed one well at 11,172-78 feet, Shell Oil Company abandoned Peters 1-A at 11,803 feet in shale. This was Shell's first attempt to establish production in the area.

South Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Abbeville—		
Continental, Brookshire 3	24	7885
Baton Rouge—		
M. T. Grubbs, College Town 2	331	6495
Bancroft—		
Republic, Columbia Land & Timber 11	12	7321
Charenton—		
DeArmand, Boudreaux 6	252	1161
Simoneaux 4	65	1232
Simoneaux 6	141	1160
Choctaw—		
Standard of La., Wilberts 11	275	4833
Creole—		
Superior State 8	389	6752
Darrow—		
Humble, Gumble 16	628	8261
Eola—		
Amerada, Marchive 6	529	8515
Geo. Lilly, Dent 1	390	8575
Sid Richardson, State 3	470	8575
Grand Lake—		
Superior, State 3	*	9776
Golden Meadows—		
Wm. Helis, Gaspard 2	*	2757
St. Mary Oil Co., Chouest 1 Unit 6	233	5185
Chouest 2	300	5282
Texas Co., LLE Golden Meadows 5	577	7949
North Crowley—		
Humble, Williams 6	408	7199
West Gueydan—		
Magnolia, Comier 2	100	7152
Acadia Parish—		
Providence Oil Co., John Estate 1, West Crowley area, 37-10s-1e	*	8277

*Failures; †Junked; ¶Million cu. ft. gas.

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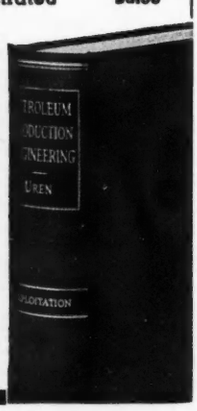

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HOUSTON, TEXAS

North Louisiana Fields

Waskom gas field being extended across Louisiana line

Shreveport.—The Pettet (Glen Rose) lime producing limits of the Waskom gas field, Harrison County, Texas, were apparently extended 2 miles northeast and across the Louisiana line into Caddo Parish last week when Arkansas Fuel Oil Company's Bell 1, SWc 6-17n-16w, showed 15 million cubic feet of gas daily in a drill-stem test. Test was made from 5627-77 feet with ¼-inch chokes at top and bottom with testing tool open 20 minutes. Pressure was 340 pounds. Top of the Pettet was given as 5629 feet. The operators prepared to core deeper. This is the fifth in a series of Pettet and Travis Peak tests being drilled by this company on the flanks of the field. Some geological theories are that the deeper strata in Waskom and the Longwood field, Caddo Parish, are linked.

Lisbon Exploration Company's Roberta Vaughan 1, NW NE 36-21n-5w, Claiborne Parish, Lower Marine test in the Lisbon field, blew out gas with a spray of oil when operators attempted to go back in the hole at 8507 feet to deepen to 9000 feet. The well for a time threatened to get from under control but operators finally were able to resume drilling and the test on October 26 drilled shale and shells at 8788 feet. Electric log showed a gas-distillate zone at 8360-68 and 8458-68 feet.

Stanolind Oil & Gas Company's Dillon 131, C SE NE 14-21n-15w, deep test at Pine Island, Caddo Parish, drilled at 9890 feet in lime and shale. Electric log found top of Smackover lime at 8953 feet.

Jack Whitson and associates of Houston assembled approximately 3000 acres of land on the southeast flank of the Bull Bayou field for a Glen Rose lime and Travis Peak test of this shallow field, location being made for M. LeLong 1, NE NE 25-12n-11w, Red River Parish. Geology was done by Dr. A. F. Crider of Shreveport. Location is believed on the south side of the Bull Bayou fault, which has never been tested for the Glen Rose or Travis Peak. The same operators have taken 3500 acres on the north flank of the shallow Bellevue field, Bossier Parish, and plan a Glen Rose lime test on Bellevue Land Company land in south half Section 27-20n-11w, 3 miles north of the 300 to 400 foot shallow Nacatoch producing field. Bellevue is a truncated dome. No deep tests have been drilled on the north flank.

Due to recent geophysical exploration, The Texas Company has leased approximately 1200 acres in Townships 22 and 23 north, Ranges 5 and 6 east, Morehouse Parish.

Thirty-three drilling permits were issued last week by the Louisiana Conservation Commission of which 10 were in North Louisiana, divided among the following parishes: Bossier, 1; Caddo, 5; and Union, 4. The 23 in South Louisiana were divided among the following parishes: Acadia, 2; Beauregard, 1; Cameron, 3; East Baton Rouge, 1; Evangeline, 4; LaFourche, 2; Plaquemines, 2; St. Landry, 1; St. Mary, 5; St. Martin, 1; and Terrebonne, 1.

North Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Caddo Parish (Pine Island-Vivian)—		
Tippett Oil Corp., Tom Bell 2, 34-22n-16w	•	2528
Caddo Parish (Pine Island)—		
J. W. Bailey, Winston 1, 8-20n-15w	10	1585
Burton & Harlan, Thompson 1, 1-20n-16w	85	1552
H. Ferguson, Pala 2, 1-20n-16w	10	1568
Ben F. French, Greer 1, 1-20n-16w	25	1565
J. G. Strahan et al, Stiles 2 29-21n-16w	60	2400
Waldron & Barnes, Arkansas Fuel 2, 1-20n-16w	20	1572
Morehouse Parish (Monroe)—		
Southern Carbon Co., Tensas Delta 26, 2-21n-4e	¶1½	2200
Union Parish (Monroe)—		
Memphis Nat. Gas Co., Langford 3, 7-22n-4e	¶1	2198
Webster Parish (Cotton Valley)—		
George Barham, Bodcaw 1, 15-21n-10w	425	5860

•Failures; †Junked; ¶Million cu. ft. gas.

Long Lake recycling hearing November 9

A hearing to determine whether Tide Water Oil Company should be permitted to continue its recycling operations in the Long Lake field has been scheduled by the Texas Railroad Commission for November 9, at Austin. This hearing was set some two weeks ago, but was postponed by agreement of all parties.

Mississippi

Tinsley Dome gets second and third oil producers

Jackson, Miss.—Addition of the second and third wells in Tinsley Dome area, Yazoo County, and indications that the Eutaw (Blossom) will produce in the district, featured developments last week in Mississippi. One location was made at Tinsley Dome and five wildcats were staked in four widely separated counties.

Union Producing Company's Perry Estate 1, C NW NW 24-13n-3w, flowed 195 barrels first 12 hours through 28/64-inch tubing choke at 4603 feet; casing pressure 125 and tubing 75 pounds. Jones & O'Brien's Stevens 1, SW SW NE 13-10n-3w, flowed 60 barrels per hour through ⅜-inch tubing choke with casing pressure 250 and tubing 190 pounds. Seven-inch casing was cemented at 4480 feet. The well logged 22 feet of saturated oil sand in the Selma

Mississippi Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
La Fayette County (Wildcat)—		
Adams O&G Co., Z. E. Llewellyn 1, 9-10s-1w	•	4167
Yazoo County (Tinsley Dome)—		
Jones & O'Brien, Stevens 1, 13-10n-3w	1440	4519
Union Prod. Co., Perry 1, 24-13n-3w	390	4603

•Failures; †Junked; ¶Million cu. ft. gas.

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chalk, with saturation from 4488 to 4510 feet; elevation was 202 feet and total depth 4519 feet.

Union Producing Company's Jennie Stevens 1, C NW NW 13-10n-3w, showed for an oil producer at 4877 feet in the Eutaw and was coring at 4953 feet in sandy shale. From 4740-60 feet the core was tight glauconitic sand and sandy shale with the next 6 feet gray and green sandy shale with streaks of glauconitic sand, and the next 20 feet was sandy lignitic sand and the bottom 3 feet slightly saturated oil sand. From 4796 to 4816 feet the core was soft green sand with streaks of oil but a drill-stem test from 4784 to 4816 feet showed mud-cut oil and a little gas. However, a drill-stem test from 4860-77 feet showed 2850 feet of 36-gravity oil and one joint of gas-cut mud in a 10-minute test with ⅜-inch chokes at top and bottom.

In Yazoo County, S. D. Redmon, H. W. McKinley and P. E. Kent, are arranging to drill a wildcat in the Mechanicsburg area, tentative location being Taylor 1, Section 15-9n-3w.

Other wildcat locations are: Attala County—P. & M. Oil Company, McMillian 1, SW SE SE 26-13n-5e; Kosciusco Oil & Gas Company, Leona Jones 1, NW NW 5-15n-9e.

Issaquena County—Locke and Mellard, Gary 1, SE NW 14-9n-6w.

Lamar County—Mississippi-Louisiana Oil Syndicate, Simmons 1, SWc NE 32-3n-14w.

Arkansas Fields

Two completions bring Magnolia count to 71

El Dorado, Ark.—Two Smackover lime oil wells were completed last week in the Magnolia field, Columbia County, bringing to 71 the oil wells in that field. Both were operations of Standard Oil Company of Louisiana, in Section 19-17-19, on the east side.

Coker Oil Corporation has run 4-inch casing to 412 feet in a Clark County wildcat, Cabe 1, NE NW NE 8-10-20, after reporting oil showings at 352 and 408 feet.

On the Arkansas-Louisiana state line in Union County, Arkansas, Shell Oil Company took 142 acres of leases in Sections 1-20-18 and 6-20-17, with the proviso that a well must be drilled within 3 years within two miles of NEc 7-23n-5w, Claiborne Parish, Louisiana. This test may go through the Smackover (Permian) lime section.

Standard Oil Company of Louisiana prepared to run electrical log last week to 3295 feet in Warnock 1, SE SE Section 36-16-20, Smackover lime wildcat test, preparatory to setting 9⅝-inch casing. Anhydrite was logged from 3165 to 3267 feet.

Arkansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Columbia County (Magnolia)—		
Standard, J. A. Foster 1, 19-17-19.	524	7594
D. H. Lewis 1, 19-17-19	400	7590
Miller County (Rodessa)—		
Feazel et al, Norton 1, 13-20-28....	408	6102
Union County (Rainbow City)—		
Joseph E. Moore, Union Sawmill 1, 24-17-14	*	3270
Union County (Schuler)—		
Marine Oil Co., Justiss 5, 18-18-17..	*	5814

* Failures; † Junked; ¶ Million cu. ft. gas.

New Mexico Fields

Western Lea County strike draws four offsets

Hobbs, N. M.—Authorized tests for the oil pool developed early this month in western Lea County by Frank Farley et al's State-Texaco 1-A, C NE SW 16-20s-32e, increased to four with the staking of an east outpost involving Continental Oil Company et al's Langston 1, C NW SW 15-20s-32e. Argo Oil Corporation's State-Texaco 1, west offset to the producer, logged anhydrite and was running 8-inch pipe near the 920-foot level. Westlea Oil Company's Cleveland-Texaco 1-C, a half mile south of the producer, was drilling below surface pipe and the company's Moore-Texaco 1, east offset, remains a location.

This new oil area has been designated Halfway, a name derived from a nearby stopping point.

The producer remained inactive the past week after swabbing 57 barrels of 28.6-gravity oil (corrected) hourly through casing from 2 feet of saturated lime drilled to 2629 feet. A pumping unit will be installed. The pay is equivalent to that of the Lea-Lynch pool, which has an exceptionally high average yield per acre for a small area that required pumping at the offset.

B. H. Nolen et al's Iles 1-A, SEc 17-16s-29e, recent strike for northern Eddy County, pumped 76 barrels of oil in 20 hours after swabbing off head built up as result of 60-quart nitro shot at 1800-20 feet.

Continental Oil Company's State 1-L-16, C NW NW 16-18s-29e, southwest edge of Loco Hills, Eddy County, swabbed 15 barrels in 24 hours from regular pay at 2582 feet, and is awaiting nitro shot.

The sandy-lime belt in eastern Lea County accounted for a large portion of the 11 new tests announced the past week. The south end of the prolific area that marks the junction of the Eunice and Penrose sectors is open for extensions which will be sought by Ohio Oil Company's State-Donald 11, NEc 13-22s-36e and Repollo Oil Company's State 6-D, SE SW SE 12-22s-36e.

A large producer for the east edge of the Lovington pool is indicated by Skelly Oil Company's State 3-O, C W½ SW SE 31-16s-37e, which flowed 630 barrels of oil natural in 16 hours through ¾-inch tubing choke when unloaded at 4930 feet. It is due to be deepened 25 feet to equal the penetration of the company's south offset. Skelly Oil Company's State 2-Q, C SW SE 36-16s-36e, is listed as a late completion, having flowed 251 barrels through tubing chokes after coring to 5094 feet. New operations include Tide Water Associated Oil Company's State 1-M, C NE SE 36-16s-36e, using odd spacing because of east offset, and Amerada Petroleum Corporation's State 5-A-L, C SE NE 1-17s-36e.

New Mexico Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Chaves County (Wildcat)—		
Western Minerals Corp., Dow 1, c sw nw 27-10s-30e	*	4090
Eddy County—		
Allen-Fair & Pope, State 4-A, se sw nw 36-17s-29e	54	3254
Bassett-Birney et al, State 1, sec sw 2-18s-29e	288	2665
Franklin Pet. Co., Yates 3-A, nwc ne 6-18s-30e	120	2845
Sanders et al, Murdock 1, nwc sw 4-18s-29e	65	2625
Yates et al, Yates 2, nw sw nw 6-18s-30e	1032	2806
Lea County (Hardy)—		
Repollo Oil Co., Turner 2, swc 29-21s-37e	760	3780
Lea County (Langlie)—		
Anderson-Prichard Oil Corp., Wells-Conoco 9, c sw ne 6-25s-37e	¶15	3592
Lea County (Lovington)—		
Amerada, State 4-A-L, cne ne 1-17s-36e	1008	4901
Skelly, State 2-Q, c sw se 36-16s-36e	251	5094
Lea County (Mattix)—		
Culbertson & Irwin, Inc., Martin 2, se ne ne 31-24s-37e	180	3545
Lea County (Penrose)—		
Danglade-Clower, Glier 2-B, nec nw 33-22s-37e	75	3680
Devonian Oil Co., Christmas 2, swc se 28-22s-37e	212	3690
Lea County (Rhodes)—		
Stanolind, Farnsworth 1-C, nw se sw 4-26s-37e	¶4.8	3160
Lea County (Vacuum)—		
Ohio, State-Warn 4, acct. 2, c se nw 6-18s-35e	1080	4639
Phillips, State-Santa Fe 32, c nw ne 33-17s-35e	1080	4588
Texas Co., State 10-O, c sw se 36-17s-34e	1335	4710

* Failures; † Junked; ¶ Million cu. ft. gas.

Rocky Mountain Fields

Lance Creek still has 16 drilling rigs active

Casper, Wyo.—Reaching 10,003 feet, The California Company's Unit 1, CSW NE 14-31n-109w, deepest hole ever drilled in Wyoming, is running 8⅝-inch casing prior to testing production in the lower sections of the hole.

Sixteen rigs are still active at Lance Creek. Another good producer for the Minnelusa series of the field drilled in this week by Argo Oil Corporation at Elliott 10-A, SE NW SE 5-35n-65w, an inside location, tested 105 barrels per hour during the first 24 hour test. Production is from the second bench of the Minnelusa series at 5450 feet.

The Ohio Oil Company's Lamb 13

Mountain States Completions

COLORADO

Company, Well and Location	Init. Prod. Bbls.	Depth
Larimer County (Fort Collins)—		
Continental, Meyers 1, cwl se sw 19-8n-68w	191	5201
Rio Blanco County (Wilson Creek)—		
Texas Co.-California Co., Unit 2, nw se sw 27-3n-94w	400	6702

MONTANA

Glacier County (Cut Bank)—		
Glacier Prod. Co., Hall 2, cne sw 35-36n-6w	75	3054
Meagher County (Moss Agate)—		
Dan Drumheller, Ringling 1, w se ne 25-7n-7e	*	2170
Toole County (Kevin-Sunburst)—		
Coolidge & Coolidge, State 1-B, nw sw ne 36-36n-2w	30	1595
Imperial-Craig Oil Co., Gauss 1, csw ne 18-35n-1w	35	1626
S. T. Scotland, McNamer 1, nw ne sw 29-35n-3w	*	1380

WYOMING

Albany County (North Big Hollow)—		
G. R. McConnell, U. P.-Fuller 1, cnl ne nw 7-15n-75w	*	1055
Big Horn County (Spence Dome)—		
A. L. Rankin, Karjala-Rankin 1, csw nw 10-54n-94w	*	910
Niobrara County (Lance Creek)—		
Argo Oil Corp., Ford 7, cnw se nw 33-36n-65w	1920	5560
Continental, Rodeo 7 on Lease 4, csw sw ne 35-36n-65w	250	4285
Park County (Oregon Basin)—		
Ohio, Sonners 1, lot 1, 8-51n-100w	200	3785
Sublette County (LaBarge)—		
Texas Co., State 2-F, sw nw 27-27n-113w	50	953

* Failures; † Junked; ¶ Million cu. ft. gas.

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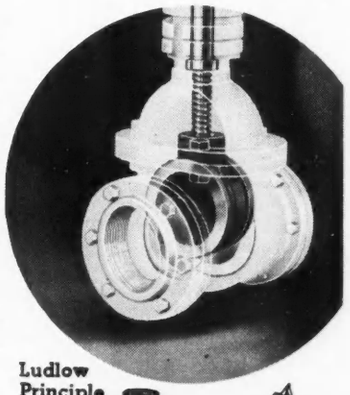

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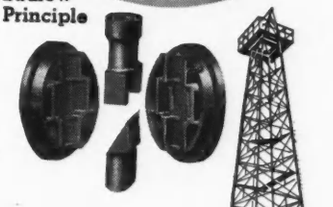

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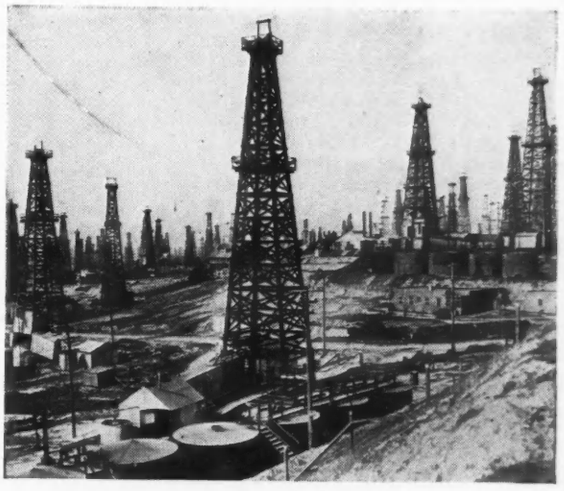

to

CHICAGO

NOVEMBER 11th

Lv. HOUSTON ..... 6:15 pm Nov. 11
Ar. CHICAGO ..... 6:00 pm Nov. 12
Lv. CHICAGO ..... 11:00 am Nov. 17

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MISSOURI PACIFIC LINES
THE ALTON RAILROAD

Account 1, CNW SE NE 5-35n-65w, drilled plug on 7-inch casing at 5268 feet on top of the Leo sand and is now testing through tubing from 5345 feet.

On the southern end of Dewey Dome, Weston County, Osage Oil Trust's Darrow 2, NE NE SW 7-41n-60w, is preparing to spud with portable rotary moved from Darrow 1 in the same section, which was abandoned in Minnelusa. On the northern end of the field, Bruce C. Teeters' State 1, SWC SW NE 32-42n-61w, has cemented 8¼-inch casing on bottom at 1860 feet.

Resumption of drilling activity is seen in the Clay Basin gas field, Daggett County, Utah, where Mountain Fuel Supply Company has located Murphy 4, SW SE SW 21-3n-24e. The company is seeking to augment gas supply for the line serving northeastern Utah.

Gas supply for central Montana is also in line for further development. The Montana Gas Corporation is spudding Bowes 1, NE SE NW 34-32n-19e, in the Bowes gas field, Blaine County. This is the first well to be started in this field in a number of years. Dakota gas sands will be the objective.

Florida test is in shale believed Pennsylvanian

St. Mary's River Oil Corporation's test in Nassau County, Florida, is drilling at 4762 feet in a black shale, which most observers with some confidence have identified as Pennsylvanian or older, although there are no fossils in it.

California Fields

Greely outpost sets pipe for test of saturated sand

Los Angeles.—General Petroleum Corporation's Sullivan 1, Section 12-29-25, an outpost northwest of Greely, Kern County, has set 8⅝-inch casing for a test, with bottom at 11,380 feet. Vedder sand was topped at 11,330 feet and barren gray sand 5 feet lower. Below that is a zone indicated well saturated and gassy, which is the object of the test.

Richfield Oil Corporation's Western B-67-4, Section 4-23-25, at Coles Levee, is coring deeper into a sand which indicated production at 9232 feet. Standard Oil Company's No. 20-4, Section 9-31-25, is preparing to make production test after drilling to 8617 feet. Each of these wells is a half mile from Standard Oil Company's No. 21-1, completed a few weeks ago producing 66-gravity oil.

Standard Oil Company has equipped Mushrush 3 at Wasco with 19x19¼x22 mud pumps, using 350-pound steam pressure. The test's objective is the 13,000-foot zone found in Continental Oil Company's A-2. It is an offset to George F. Getty's Janssen 1.

Three wells at the northern end of Kettleman are being deepened to try for Eocene production, encouraged by results at East Coalinga in that zone. The wells, Superior Oil Company's Huffman 4 and Standard Oil Company's No. 27-19J and No. 72-19J, previously were completed in Temblor for substantial yields.

Michigan Fields

Walker north and south portions get connecting link

Mt. Pleasant, Mich.—Twelve wildcat completions in Michigan produced 2 pumper wells and will require additional drilling before causing excitement. Other developments included logging of Traverse oil saturation in a Cass County wildcat, extension of Temple, Clare County, nearly a half mile northwest, and linking of the north and south areas of Walker, Kent County.

R. T. & E. Corporation's Tyson 1, Section 18-4s-13w, Van Buren County, 19 miles southeast of Bloomingdale, after 500-gallon acid treatment pumped 12 to 26 barrels after the third day. Production is from Traverse lime at 1164 feet.

Borough, Inc.'s Walch 1, Section 18-15n-6w, Isabella County, plugged back from dry Monroe at 3995 feet to 3333 feet in Traverse. Tests with pump indicated 15 to 30 barrels.

Silver Creek Oil Company logged saturation in Traverse at 809 feet, 2 feet in the lime, on Flynn 1, Section 23-5s-16w, Cass County, a wildcat, and shut down for orders.

Pure Oil Company's State-Sparrow A4, N½ NW SE Section 29-19n-6w, Redding Township, Clare County, initialed 212 barrels in 12 hours from Monroe at 3850 feet to extend the Temple field nearly a half mile northwest. It likewise proved up several tracts on which the state has the mineral rights, and will auction along with 20,000,000 acres of wildcat leases, November 3.

Although proving up from 10 to 20 locations, James T. Flannigan's Taft 1, Section 33-7n-12w, Walker Township, Kent County, good for 1500 barrels, was primarily interesting as the link between the upper and lower pools. Kent was discovered in 1938 but did not get development until the spring of this year. Major development spread east and south from the discovery. A well on the then north side by C. A. Welch and Walter L. McClanahan, lacked porosity and made a 75-barrel pumper. It was booked 30 feet lower than the average producing contour in the field and was referred to as the lowest point. In mid-year Voorhees Oil Company stepped out 2 miles northwest and brought in a 33-barrel-per-hour well, and drilling the past 2 months has concentrated north of the first big play.

Two weeks ago the elevation was rerun on the McClanahan-Welch test and found 30 feet off, placing it back up well in the producing contour. The 1500-barrel well drilled by Flannigan is 660 feet north of the "low" well. Operators now anticipate that the originally contoured saddle will not be found between the 2 pools.

California Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Orange County (Huntington Beach)—		
Southwest Explo. Co., State 22	564	5203
Los Angeles County (Long Beach)—		
Hilldon Oil Co., Amebco 3	106	5290
Italo Pet. Co., Lightburn 3	68	3168
Los Angeles County (Montebello West)—		
Albertson-Boswell, Schnackenberg 1	765	7686
Sunset Oil Co., Howell 1	100	7660
Union, Paul Howard 7	250	7630
Wilcox 5	105	7630
Wilcox 7	400	7640
Los Angeles County (Potrero)—		
Basin Oil Co., Transwestern 1	194	6379
Kern County (Belridge)—		
Belridge Oil Co., No. 39	1260	8275
Fresno County (East Coalinga Eocene Pool)—		
Robert S. Lytle, No. 28 18F	1905	7838
Kings County (Kettleman No. Dome)—		
K.N.D.A. No. 25-26Q	2814	7920
Standard, No. 63-17Q	2989	8490
Kern County (Midway Sunset)—		
National Oil Co., No. 33	150	2410
Kern County (Mountain View—South)—		
Texas Co., Jewett 2	71	7722
Santa Barbara County (Santa Barbara Mesa)—		
Transoceanic, M'divani 4	50	1584
Ventura County (Ventura Avenue)—		
Shell, Taylor 102	1962	7706
Los Angeles County (Long Beach)—		
Wm. H. Cree, Harriman Jones 4	•	4126

• Failures; † Junked; ¶ Million cu. ft. gas.

Michigan Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegan County—		
Vahue & Wrays, Smith 1, se nw sw 11-2n-13w	•	1490
A. E. Kooparasch, Schuler 1, se ne ne 13-2n-13w	•	1455
R. H. Grant, Lyman 1, se nw nw 23-1n-16w	•	1235
H. H. Heinig, Shaw 1, nw sw se 29-3n-13w	•	1648
Socony-Vacuum, Twining 3, ne se se 3-4n-13w	150	1645
Arenac County—		
W. E. Ross, Kainder 1, c sw nw 10-20n-4e	¶8	1153
Clare County—		
Taggart Bros., Perkins 19, c ne 14-18n-6w	¶2	1506
American Prod. Co., Frackelton 3, c nw 17-18n-5w	¶10	1531
Pure, Kubat 1, sw sw ne 27-19n-6w	35	3893
State-Sparrow 4, n nw se 29-19n-6w	400	3850
State A7, c n sw nw 33-19n-6w	1100	3889
State A8, c w e½ nw 33-19n-6w	200	3892
American Dr'lg Co., Newcomer 7, c s ne ne 32-19n-6w	1200	3891
Isabella County—		
Borough, Inc., Walch 1, sw sw nw 18-15n-6w	25	3333
McClanahan Oil Co., Nixon 2, se ne se 17-16n-3w	115	3706
Kalamazoo County—		
Twin Drilling Co., Neeson 1, sw sw se 19-1s-12w	•	1341
Kent County—		
Hoffman Oil Co., Barker 1, ne ne ne 20-8n-10w	•	2410
Fisher & McCall, Lawns 1, se se sw 20-7n-12w	30	1907
Bultema 1, c se nw 29-7n-12w	700	1887
Wolverine Nat. Gas Co., Kniff 2, ne sw se 29-7n-12w	125	1910
Hoey 4, ne ne sw 30-7n-12w	800	1889
Carl Westlund's O'Brien 1, se ne se 29-7n-12w	150	1928
Smith Pet. Co., Taalman 2, nw nw sw 29-7n-12w	2200	1868
H. C. William, Thurkettle 1, se ne sw 29-7n-12w	1000	1888
Gordon & Bolgers, Dykstra 2, c n s se ne 30-7n-12w	100	1916
Eastern Pet. Co., Marcellus 1, se sw nw 30-7n-12w	200	1906
Muskegon Oil Co., Wirth 2, nw ne nw 30-7n-12w	60	1933
McGerry, Inc., Patrick 1, nw sw ne 31-7n-12w	75	1886
Louis Rose, Radawski 1, nw sw ne 31-7n-12w	375	1882
James Flannigan, Taft 1, se nw nw 33-7n-12w	1500	1854
Mecosta County—		
Turner Pet. Co., Bonagard 1, c s nw ne 21-16n-7w	•	3882
Ottawa County—		
Gordon Oil Co., Quinlan 1, se se se 16-7n-13w	•	2010
Gaylord Norton, Bjork 1, se nw se 25-7n-13w	300	1863
Gordon Oil Co., Heybor 1, ne nw se 25-7n-13w	500	1868
Twin Drilling Co., Hearn 1, nw ne sw 34-8n-13w	•	1924
Freeman Oil Co., Huyser 2, nw se se 5-5n-14w	•	1760
Huyser 3, ne sw se 5-5n-14w	•	1686
Fortney & Crydens, Essing 1, ne ne sw 25-5n-14w	•	1744
Roscommon County—		
C. L. Maguire, Russel 1, c s½ sw ne 13-23n-2w	•	1550
Van Buren County—		
Anna Prather, Shugar 1, se nw sw 21-2s-16w	15	1004
R. T. & E., Tyson 1, sw sw sw 18-4s-13w	22	1164

• Failures; † Junked; ¶ Million cu. ft. gas.

WILDCAT REPORT
New Starts and Completions

CALIFORNIA
FIRST REPORTS

Santa Barbara County—O. K. Hearte's No. 1, nwc ne se 11-9-25, Cuyama area, rur.

San Luis Obispo County—Todd Pettigrew et al's No. 1, sec 8-32-22, Elkhorn-Carrixa area, rig.

ILLINOIS
FIRST REPORTS

Edgar County—Burkitt's Schoitker 1, ne se 30-16n-11w, lcn. Meyers' Schneider 1, se se nw 29-13n-13w, dr 1500 ft. Morris Yeager's H. Hannah 1, nw nw 11-12n-13w, dr 525 ft.

Edwards County—R. Jones' Schroeder 1, se sw se 27-2s-14w, sd 1450 ft.

Fayette County—M. Conrey's Smith 1, ne ne nw 6-5n-3e, rigging rotary.

Franklin County—E. S. Adkins' Old Ben Coal 1, sw nw 21-6s-2e, 1550 ft.

Monroe County—Cummings et al's Boyer 2, se sw se 19-1s-10w, dr 750 ft.

Richland County—Hugill's (Leathers et al's) Ray Milone 1, nw ne 21-3n-14w, old well being deepened from 2585 ft, dk.

Wabash County—Wiggins' Stickler 1, nw 26-1s-13w, lcn.

Wayne County—South State Dev. Co.'s W. Grubb 1, se sw nw 24-2s-8e, dr 400 ft. Cayuna's J. V. Borah 1, c e½ sw ne 23-1s-8e, dk.

White County—Choate et al's Carmi Bank 1, ne ne sw 8-3s-9e, dk.

COMPLETIONS

Clinton County—J. J. Farrelly et al's Geo. Bergman 1-B, nw sw nw 25-1n-4w, Germantown tnp, abnd 108 ft.

Edwards County—Roach, Voyles et al's A. Lee 2, nw ne se 11-1s-10e, top McClosky 3365 ft, abnd 3392 ft.

Jefferson County—Oils, Inc.'s Mace 1, ne sw sw 34-3s-3e, Dodds tnp, abnd 3046 ft. S. L. Reinhardt's Inland Steel Co. 1, c s½ se se 36-4s-1e, Bald Hill tnp, top St. Louis 3040 ft, abnd 3167 ft.

Marion County—W. F. Kelley's Mason 1, c nw sw nw 20-3n-1e, Carrigan tnp, top Devonian 2986 ft, abnd 3100 ft.

Washington County—Comanche Oil Co.'s Zgonia 1, top St. Louis 1798 ft, abnd 1800 ft.

INDIANA
FIRST REPORTS

Posey County—Superior Oil Co.'s Mumford 1, 1650 ft from the n line and 2970 ft from the e line, ne 31-3s-13w, spud.

COMPLETIONS

St. Joseph County—K. V. Nilson's Kush 1, 210 ft from the n line and 260 ft from the e line ne nw 8-37n-1e, top Trenton 1496 ft, abnd 1635 ft.

KANSAS
FIRST REPORTS

Cowley County—Holl et al's Olsen 1, nec sw 6-35-8e, pits.

Ellis County—Virginia Drilling Co. et al's Craig 1, cel se se 8-11-16w, lcn.

Jackson County—Hawn et al's Ernst 1, nwc sw 6-8-16e, rig.

Jefferson County—Mosbacker et al's McLaughlin 1, sw ne nw 4-10-20e, sd 125 ft.

Lyon County—Ridell et al's Beals 1, c nw 15-21-12e, lcn.

McPherson County—Westgate-Greenland Oil Co.'s McCulle 1, cel ne sw 29-17-11w, lcn. Carlock's Hoyer 1, c se nw 6-21-1w, rig.

COMPLETIONS

Johnson County—McCain et al's Lyon 1, nw sw ne 27-13-22e, 6 mi w Olathe, top Mississippi 990 ft, abnd 1000 ft.

STATE	WILDCATS STARTED		WILDCAT TESTS COMPLETED							
			Total		Oil		Gas		Dry	
	This Week	This Year	This Week	This Year	This Week	This Year	This Week	This Year	This Week	This Year
Alabama	...	5	...	2	...	...	...	...	...	2
Arkansas	...	34	...	22	...	2	...	...	...	20
California	2	179	...	76	...	20	...	2	...	54
Colorado	...	3	...	1	...	...	...	...	...	1
Florida	...	3	...	1	...	...	...	...	...	1
Georgia	...	3	...	1	...	...	...	...	...	1
Illinois	12	511	5	389	...	27	...	2	5	360
Indiana	1	61	1	38	...	9	...	1	1	28
Kansas	7	214	1	200	...	53	...	9	1	138
Kentucky	7	59	1	26	...	8	...	...	1	18
Louisiana	2	116	2	90	...	13	...	3	2	74
North Louisiana	1	39	...	27	...	3	...	1	...	23
South Louisiana	1	77	2	63	...	10	...	2	2	51
Michigan	7	225	12	285	2	21	...	...	10	264
Maryland	...	1	...	...	...	...	...	...	...	...
Mississippi	5	22	1	10	...	1	...	...	1	9
Missouri	4	57	2	31	...	...	...	3	2	28
Montana	...	5	1	3	...	...	...	...	1	3
Nebraska	...	1	...	1	...	...	...	...	...	1
New Mexico	1	36	...	27	...	1	...	1	...	25
New York	...	1	...	4	...	1	...	1	...	2
Oklahoma	9	151	4	151	...	18	1	7	3	126
Ohio	...	4	...	10	...	1	...	...	...	9
Pennsylvania	...	3	...	6	...	...	...	1	...	5
South Dakota	...	2	...	2	...	...	...	...	...	2
Texas	32	919	21	984	3	92	...	20	18	872
East Texas	3	107	5	97	...	3	...	1	5	93
North Texas	1	113	3	187	...	26	...	1	3	160
Gulf Coast	5	94	1	82	1	8	...	1	...	73
Panhandle	1	11	1	9	...	...	...	1	1	8
South Texas	20	430	8	447	1	35	...	14	7	398
West Texas	2	164	3	161	1	19	...	2	2	140
Utah	...	1	...	...	...	...	...	...	...	...
West Virginia	...	2	...	1	...	...	...	...	...	1
Wyoming	...	6	1	4	...	...	...	...	1	4
Total U. S.	89	2,624	52	2,375	5	267	1	50	46	2,058

KENTUCKY
FIRST REPORTS

Breckenridge County—Kimmell & Parks' Federal Land Bank 1, 1190 ft from w line and 925 ft from n line, Section 4-O-37, dr.

Butler County—Henry Ross' Forsythe & Neal 1, 140 ft from s line and 4650 ft from e line, Section 12-I-34, sd 675 ft. Hume & Steele's T. E. Carvile 1, 4420 ft from n line and 2150 ft from e line 8-G-34, rigging machine.

Hancock County—Cripler & Coates' H. H. Hendrix 1, 1000 ft from w line and 390 ft from s line Section 13-O-34, set 6-in 582 ft.

Livingston County—Lewis E. Maxson's Wells 1, 2300 ft from w line and 225 ft from s line Section 23-I-16, dr.

Todd County—Eubanks Bros.' B. M. Scott 1, 500 ft from w line and 1200 ft from n line, Section 13-D-29, sd 290 ft. A. A. Peard's Estes 1, 3700 ft from n line and 1700 ft from w line, Section 5-D-30, lcn.

COMPLETIONS

Breckenridge County—L. L. Benoist et al's W. Mooreman 1, 1600 ft from s line and 1650 ft from e line, Section 21-O-36, abnd 454 ft.

NORTH LOUISIANA
FIRST REPORTS

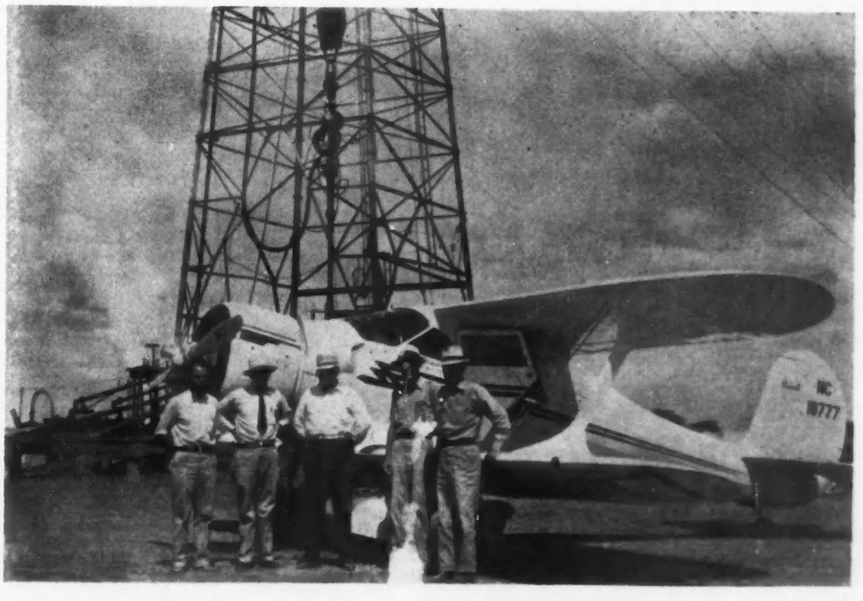
Red River Parish—Jack Whitson et al, M. LeLong 1, ne ne 25-12n-11w, lcn (Travis Peak test near old Bull Bayou field).

SOUTH LOUISIANA
FIRST REPORTS

Vermilion Parish—Texas Co.'s School Board 1, Erath prospect, se se 16-13s-4e, lcn.

COMPLETIONS

Terrebonne Parish—Texas Co.'s State 3, Coon Point salt dome, 5800 ft from State 1,



Having a landing field for an airplane right at the site of a drilling well is an unusual situation shown in this photograph. The well in the background is Blanco Oil Company and Al Buchanan Production Company's Dunwoody 13, Heyser Field, Calhoun County, Texas. Standing in front of Al Buchanan's private plane, reading from left to right, are: R. O. Van Fleet, petroleum engineer and production superintendent; Bill Cason, pilot; Al Buchanan, president of Al Buchanan Production Company; Guy Ratliff, geologist, and Buck Hill, toolpusher.

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HOUSTON, TEXAS

Caillou Bay, 23s-14e, topped salt 8475 ft, abnd salt 8488 ft.

Vernon Parish—Pan American's Anderson-Post Lbr. Co. 1, Caney area, 466 ft w and 466 ft s nec nw 27-2n-11w, abnd 6501 ft.

MICHIGAN

FIRST REPORTS

Gladwin County—Sun Oil Co.'s Cameron 1, ne ne 10-18n-2w, rig.

Kalamazoo County—Bliss Keeler's Blanchard 1, sw nw sw 31-3s-11w, dr.

Kent County—James J. McGerry's Welton 1, nw sw nw 36-5n-10w, rig.

Mecosta County—Red-Man Oil Co.'s Frover 1, nw ne se 14-15n-7w, rig.

Oceana County—W. K. Swan's Howard 1, se ne 27-16n-16w, dr.

Van Buren County—H. A. Marchant's Filbrandt 1, sw sw se 9-1s-16w, rig.

COMPLETIONS

Allegan County—Vahue & Wray's Smith 1, se nw sw 11-2n-13w, Traverse 1452 ft, abnd 1490 ft. A. E. Kopprasch's Schuler 1, se ne ne 15-2n-13w, Traverse 1487 ft, abnd 1455 ft. R. H. Grant's Lyman 1, se nw nw 23-1n-16w, Traverse 1160 ft, abnd 1235 ft. H. Heinig's Shaw 1, nw sw se 29-3n-13w, Traverse 1577 ft, abnd 1648 ft.

Isabella County—Borough, Inc.'s Walch 1, sw sw nw 18-15n-6w, Traverse 3172 ft, td 3995 ft, pb to 3333 ft, acidized, pumping 22 barrels day from Traverse; 3 miles northwest of Sherman pool (produces from Monroe).

Kalamazoo County — Twin Drilling Co.'s Neeson 1, sw sw se 19-1s-12w, abnd 1341 ft.

Kent County—Huffman Drilling Co.'s Barker 1, ne ne ne 20-8n-10w, Traverse 2366 ft, abnd 2410 ft.

Mecosta County—Turner Petroleum Corp.'s Bangard 1, c s½ nw ne 21-16n-7w, Dundee 3813 ft, abnd 3832 ft.

Ottawa County—Gordon Oil Co.'s Quinlan 1, se se se 16-7n-13w, Traverse 1916 ft, abnd 2010 ft. Twin Drilling Co.'s O'Hearn 1, nw ne sw 34-8n-13w, Traverse 1915 ft, abnd 1924 ft.

Roscommon County—C. L. Maguire's Russell 1, c s sw ne 13-23n-2w, abnd 1550 ft.

Van Buren County—R. T. & E. Corp.'s Tyson 1, sw sw sw 18-4s-13w, Traverse 1117 ft, pay 1146 ft, td 1169 ft, pb to 1164 ft, acidized 500 gallons, pumping 15 to 25 barrels oil day.

MISSISSIPPI

FIRST REPORTS

Atta'a County—P & M Oil Co.'s McMillian 1, sw se se 26-13n-5e, mim. Kosciusco O&G Co.'s Jones 1, nw nw 5-15n-9e, mim.

Issaquena County—Locke & Mellard's Gary 1, w se nw 14-9n-6w, rig.

Lamar County — Mississippi-Louisiana Oil Synd.'s Simmons 1, swc ne 32-3n-14w, rig.

Wilkinson County—La. Progress Oil, Inc., Young 1, sec 40-4n-1e, bldg road.

COMPLETIONS

LaFayette County—Adams O&G Co., Z. E. Llewellyn 1, located 990 ft e of west line and 330 ft s of n line ne nw nw 9-10s-1w, abnd 4167 ft in Ordivician.

MISSOURI

FIRST REPORTS

Adair County—McGinnis' Laughlin 1, sec sw 18-62n-15w, ru machine.

Andrew County—Neely et al's Shores 1, sec 12-60n-37w, pits.

Jackson County—Dodson's Fee 1, nwc ne 17-47n-30w, sd.

Platte County—Roach-Vincent et al's Dillingham 1, ne sw 16-53n-34w, lcn.

COMPLETIONS

Livingston County—Davis Brothers et al's Minning 1, sec nw 22-58n-23w, top Kinderhook 773 ft, top Hunton 783 ft, lower Hunton 1010 ft, top Viola 1079 ft, top St. Peter 1215 ft, abnd 1225 ft.

Schuyler County—Baldwin's Johnson 1, nw ne ne 21-65n-15w, 15 mi. n. Kirksville, sg 216-225 ft, top Mississippi 300 ft, lost hole, abnd 322 ft.

MONTANA

COMPLETIONS

Meagher County—Dan Drumheller's Ringling 1, w se ne 25-7n-7e, abnd 2170 ft.

NEW MEXICO

COMPLETION

Chaves County — Western Minerals Corp., Dow 1, c sw nw 27-10s-30e, elev 4086 ft, top anhydrite 955 ft, top salt 1010 ft, top lime 2870 ft, logged nominal oil shows below 3592 ft, sul w 3985-4090 ft and abnd.

OKLAHOMA

FIRST REPORTS

Cleveland County—Hollenbach et al's McAllister 1, nwc se 30-19n-1w, rig. Rucker et al's Foster 1, nec se 17-9n-2w, rig.

Cotton County—McCarty et al's Jones 1, sec 24-4s-10w, dr.

Garvin County—Duckworth et al's Bowie 1, nw ne se 3-4n-3e, dr.

Grady County—Alma Oil Co.'s Pettitt 5, sec 11-4n-8w, dr.

Jackson County—Helton et al's Lee 1, ne se nw 36-2n-19w, dr.

Kay County—Freeland's Voehl 1, 34-27n-2w, sd 1055 ft.

Muskogee County—Garrett's Escoe 1, swc se 16-13n-17e, rig.

Pottawatomie County—Pace et al's Whitehead 1, swc se 36-10n-3e, pits.

COMPLETIONS

McIntosh County—Pine's Marlin 1, c n½ se ne 14-11n-16e, 3 mi n Onapa gas pool, top sand 2360 ft, 5-inch csg. 2368 ft, td 2372 ft, 955 lbs. rp, 4,500,000 cu ft gas. Scruggs et al's Lanning 1, se sw sw 19-12n-15e, 3 mi e Hoffman gas pool, top Wilcox 3515 ft, hfw 3540 ft.

Pontotoc County—Simpson-Roodhouse's McKoy 1, swc ne 1-2n-7e, 3½ mi ne Fitts pool, top McLish 2700 ft, top Dolomite 2779 ft, abnd 2859 ft. Marchant's Phillips 1, c w½ sw ne 8-4n-5e, 1½ mi s Beebe pool, top Viola 1730 ft, so 2040 ft, top first Wilcox 2815 ft, so 2160 ft, abnd.

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EAST TEXAS

FIRST REPORTS

Hill County—Carter-Bowland et al's J. H. Atchison 1, 480 ft out of sec of tract and E. Carroll sur, 5 mi w of Hillsboro, cem sur csg.

Navarro County—J. H. Burk et al's Fee 1, 810 ft out of sec of tract and Edmondson sur, 1 mi n Powell, mim for shallow test.

Smith County—Shell Oil Co.'s Henry Campbell 1, 600 ft from n and 500 ft from w lines of 74-acre tr and Phillip Lively sur No. 291, A-566, mim for Trinity test.

COMPLETIONS

Ellis County—C. M. Beckner et al's H. A. Styles 1, 150 ft out of sec of w 35 acres of s 70 acres of n 125 acres of A. Bullock sur, 3½ mi w Maypearl, junked 905 ft.

Freestone County—Brothers Oil Co.'s Ball Est. 1, 330 ft out of sec of nw 100 acres of 640-ac tract, M. Rionda sur, 5 mi w ny n of Butler, elev 247 ft, Pecan chalk 3296-3425 ft, top Austin 4639-5023 ft, abnd 5524 ft.

Limestone County—J. R. Bunn Drl. Co. & Willis' R. B. Gordon 1, 250 ft ne of m/e/sw and 3000 ft se of m/n/nw line of G. W. McGrew sur, 2 mi n Coolidge, abnd 1470 ft.

Navarro County—J. H. Burke et al's S. E. Johnson 1, 3630 ft from w and 1489 ft from n lines of J. P. Harden sur, 1½ mi n Powell, abnd 1400 ft.

Smith County—E. B. James O&G Co.'s B. H. Lunceford 1, 520 varas from e and 83 varas from n lines of W. Shipp sur, 3 mi nw Garden Valley, elev 392 ft, abnd 2083 ft.

WEST TEXAS

FIRST REPORTS

Jones County—Danciger Oil & Refineries' B. P. Davenport 1, ne nw ne sec 23, Deaf & Dumb Asylum Lands, Palo Pinto lime test, cem sur csg. Ungren-Frazier & Hedrick Oil Co. Ltd.'s H. F. Lewis 1, 330 ft from n and 1152 ft from w lines subdiv 7, W. C. Walker sur No. 6, sp.

Pecos County — Humble O&R Co.'s B. D. Young 1, 660 ft from nw and 1980 ft from sw lines H&GN sec 33, blk 10, rur for Ordovician test.

Reeves County—T. A. T. Oil Co.'s G. Orendorff 1, nw nw se PSL sec 10, blk 59, lcn.

COMPLETIONS

Crane County—Gulf Oil Corp.'s W. N. Waddell et al 11, 440 ft out of sec PSL sec 20, blk B-21, elev 2635 ft, pay 4625-80 ft, used 5000 gals acid, flowed rate 97 barrels 29-gravity oil and 27 bbls water initial on input gas.

Gaines County — Osage Drl. Co.'s G. D. Johnson-Ohio 1, c se se W. T. Ry. sec 268, blk G, elev 3422 ft, trace oil 5425-67 ft, abnd in sul w 5491 ft.

Jones County—Hickok & Harry Reynolds' C. W. Williams 1, 440 ft out of sec D&DA sec 24, top Palo Pinto lime 3363 ft, trace oil 3363-68 ft, abnd in water 3368-85 ft.

TEXAS PANHANDLE

FIRST REPORT

Sherman County—I. T. I. O. Co.'s C. S. Bryant 1, c nw T&NO sec 369, blk 1-T, mim for Ordovician test.

COMPLETION

Armstrong County — Holmes-Newblock & Haley's E. J. Moore 1, 1954 ft from n and 1000 ft from w lines H&GN sec 319, blk B-4, elev 3251 ft, top salt 570 ft, abnd 4509 ft.

NORTH TEXAS

FIRST REPORT

Young County—A. T. Strong et al's E. C. Stovall 1, 660 ft out of nec sec 2946, TE&L sur, mim for 4800-ft test.

COMPLETIONS

Clay County—M. A. Lanning, Tr.'s Moore-Richolt 1, 350 ft from s and 150 ft from w lines blk 9, Bacon subdiv, abnd 1305 ft. Shell Oil Co.'s Scaling 1, 20 ft n and w of center blk 87, J. H. Belcher sur, top Caddo 5391 ft, abnd in shale 5436 ft.

Hardeman County—Amerada Pet. Corp.'s W. M. Rice 1, 1635 ft from w and 1679 ft from n lines W&NW sec 81, blk H, top lime 5272 ft, top Bend lime 7270 ft, top Ellenberger 8096 ft, abnd 8258 ft.

SOUTH TEXAS

FIRST REPORTS

Duval County—Mills Bennett Prod. Co.'s Ira G. Yates 2-a, 1700 ft n line, 3200 ft e line, J. Poltevent Sur. No. 224, 4½ mi nw Fitzsimmons field, lcn. J. B. Blanchard et al's Parr 1, 2332 ft nw line, 466 ft ne line of T. C. Rogers Sur. 22, 1¼ mi nw of Muralla field, lcn. Magnolia Petroleum Co.'s Duval County Ranch Co. 1 (300), 1320 ft s line, 1320 ft e line, GC and SF Sur. 300, 7 mi sw SRC field, moving in.

Guadalupe County—Pat Armstrong's Seefje 1, 150 ft n line, 150 ft w line of 10-ac tr., J. D. Clements Sur., lcn. Knute Evjen's Brawner 1, 432 ft n line, 945 ft w line, 160-ac tr., J. B. Pickens Sur., 5 mi e Kingsbury, lcn.

Jim Wells County—Robert Bowles Oil Co.'s Whatley 1, 330 ft s line, 330 ft w line of Blk. 13, Los Altos Rancho subd, ¼ mi n Ben Bolt extension, lcn.

Kleberg County—Humble Oil & Refining Co.'s Reed 1, 660 ft n line, 330 ft e line, Lot 2, Sec. 25, Kleberg Town & Improvement Co. subd., Rincon de Santos Gertrudis gr., preparing to move on.

LaSalle County—Eugene Garner's Yeager 6, 264 ft s line, 510 ft e line, Blk. 3, Sec. 3, Wallace subd., and in Joseph House Survey, se part of county, lcn.

Live Oak County—Loma Oil Co.'s Vernor 1, 1760 ft se line, 180 ft sw line of 1182.6-ac tr., in John Turner Sur., 8 mi w of Three Rivers, spudded.

McMullen County—Morris Drilling Co.'s J. J. Meier 1, 150 ft s line, 150 ft e line of lse. in 230-ac tr., Blk. 8, James Garner Sur., lcn. R. M. Thornton, Jr., tr.'s Clifton-Wheeler 1, 1000 ft s line of 350-ac tr, and 2100 ft e of Bend in Frio River which is w line of tract, R. Ramon sur 11, 13 mi w Tilden, lcn. R. M. Thornton, Jr., Tr.'s G. W. Henry 1, 150 ft e line, 1900 varas s line of 1312-ac tr, N. Wright Sur. 13, 14 mi due west of Tilden near LaSalle County line, lcn.

Nueces County—Stanolind Oil & Gas Co.'s Thompson 1, in center of w½ lot 49, Nueces Winter Gardens subd, Jose Vicente de Lopez Herrera gr, coring 4966 ft. Wellington Oil Co. and Pan American Production Co.'s Driscoll 1-b, 330 ft n line, 330 ft w line of 80-ac lse, John Low Sur., ab-206, east outpost to Clara Driscoll field, spudded. Wellington Oil Co. and Seaboard Oil Corp.'s Martin 1, 990 ft n line, 1650 ft w line of Sec. 130, George H. Paul's subd, of Driscoll Ranch, set surface casing.

Victoria County—Renwar Oil Corp.'s Stoner 1, 330 ft w of railroad, 800 ft se line of Diego Garcia Sur., ab-29, 8 mi s of Victoria, spudded.

Webb County—W. C. McBride's M. Vela 1, 330 ft n line, 330 ft e line of n½ of sw¼ of Sur. 265, 6 mi n Oilton, lcn. Noble, et al's Row & Bunham 1, 1750 ft s line, 3050 ft w line of Sur. 1698, 6 mi nw Carolina-Texas field, lcn.

Williamson County—H. C. LeFors' H. J. Priesmeyer 1, 150 ft n line, 330 ft w line, 40-ac tr, J. Bevil Sur., lcn.

Zapata County—Transwestern Oil Co.'s Trevino 1, 330 ft n line, 330 ft w line of s½ of SK and K Sur 63, 1 mi e Escobas field, lcn.

COMPLETIONS

Gonzales County—Mudge Oil Co.'s Edwards 1, abnd 1599 ft.

Jim Wells County—Parr and Delaney Oil Co.'s Lindsay & Reed 1-a, 330 ft w line, 467 ft s line of Lot 21, W. L. Whitman subd. of Los Altos gr, abnd 5740 ft.

Kleberg County—Humble Oil & Refining Co.'s M. Garza 1, 660 ft s line, 330 ft e line of Blk. 5, Sec. 37, Kleberg Town & Improvement Co. subd, Heirs of Leonardo L. de la Garza gr, abnd 6937 ft.

Nueces County—N. W. Hunter's H. C. Mantor 1, 466 ft s line, 466 ft nw line of Blk. 23, Mantor, Briggs and Kuykendall subd., Juan Jose de la Garza Montemayor & Sons, abnd 6263 ft.

San Patricio County—Seaboard Oil Corp.'s M. C. Smith 1, 467 ft s line, 467 ft e line of 194.07-ac of s 314.07-ac of 628.14-ac tr in Juan Hart Sur., 5½ csg 7108 ft, total depth 7295 ft; flowed 28½ bbls 57-gr distillate, 15 hrs, ¾ choke, gas volume 3,800,000 cu ft per day, perf 6995-7000 ft, opens Odem field. Wellington Oil Co.'s J. F. Welder Heirs b-2, 566 ft n old bed of Nueces River and 466 ft e of w line of Cayentano de la Garzo gr, abnd 6105 ft.

Webb County—Magnolia Petroleum Co.'s Garcia-Arriba 2, 330 ft s line 990 ft e line, Blk. 9, Henry James subd, Albercas de Arriba Sur., abnd 4250 ft. J. R. B. Moore's A. S. Billings 1, 330 ft s line, 330 ft w line, Sur. 13, abnd 2518 ft.

TEXAS GULF COAST

FIRST REPORTS

Harris County—H. C. Cockburn's Bunkett Estate 1, Mt. Houston area, 5150 ft e and 150 ft s of nwc of J. Bundick sur, lcn. Temple Hargrove's Hermann Hospital 1, Addicks area, 4800 ft s of n line and 3300 ft e of w line of Wm. Hardin sur, lcn. Dick Schwab's Robertson 1, n of Satsuma, 466 ft fr s and w lines of 320 acre tract, A. Lawson sur, lcn.

Brazoria County—Frazier & Mayo's Darrington Farm 1, Sandy Point, 1700 ft w and slightly s of Hamman's State 1, A. McFarland sur, lcn.

Ft. Bend County—Superior Oil Corp.'s A. P. George 1, two mi sw Booth, 4170 ft fr sw line and 2085 ft fr se line of W. Martin League, lcn. Gulf's Brown 1, Juliff area, 500 ft fr w and 498 ft fr n and s line of 294-ac tract, Wm. Pettus sur, lcn.

Matagorda County—Pure Oil Co.'s Woodhouse 1, Collegeport, 330 ft n of s line and 660 ft e of w line of 40-acre tract, Lewis De Moss sur, lcn.

Wharton County—J. F. Hutchin's A. P. Borden 1, Mackey, 944 ft nw and 841 ft ne of sc of 160-ac tract in H. Griffith sur, lcn.

COMPLETIONS

Ft. Bend County—H. C. Cockburn's Dzierzanowski 1, Rosenberg, 466 ft fr se, 466 ft fr ne line of 139.5-ac tract, E. Myers sur, dr to 7773 ft, 81 bbls 55-gr distillate, ¼-in choke, tp 1325 pounds, cp 1350 pounds.

WYOMING

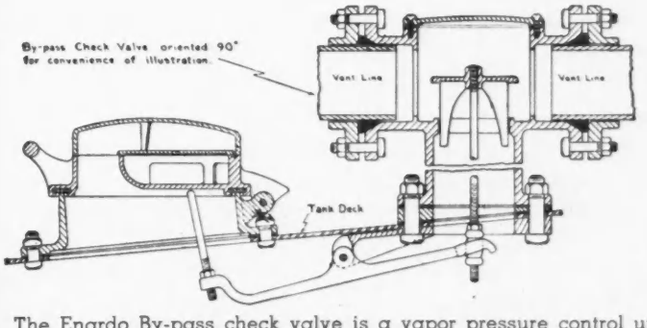
COMPLETIONS

Big Horn County—A. L. Rankin's Karjala-Rankin 1, csw nw 10-54n-94w, abnd 910 ft.

Western Tennessee basin to be explored

Celina, Tenn.—Attention of the several geophysical parties working in western Tennessee is now turning to Fayette, Haywood, Carroll and Gibson counties where a large alluvium basin is attracting attention. It is reported that more than 500,000 acres are under lease in the western half of the state.

ENARDO VAPOR CONTROL SYSTEM



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NOTES FOR THE Equipment Buyer and User

Roller Chain

MORSE CHAIN COMPANY

A channel-lubricated roller chain, which conforms to American Standard dimensions and is completely interchangeable with all other standard roller chains, has recently been announced by Morse Chain Company, Ithaca, New York. A particularly ingenious design retains the self lubricating features of Morse Roller Chain while adding this complete interchangeability.

Oil applied on the outside surface of the rollers of any roller chain will seep under rollers and lubricate inner roller surfaces turning on the bushings. However, an announcement says, until the introduction by Morse Chain Company several years ago of a roller chain of unique pin and bushing design, the difficulty was in getting oil past the bushing to the core of the joint—the pin.

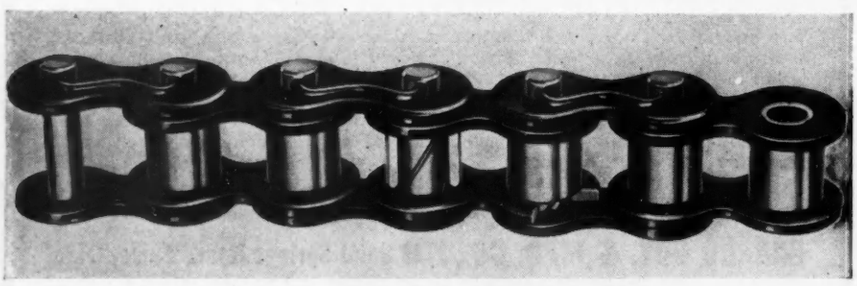
In this round-pin Morse roller chain, diagonal channels are rolled into the stock from which the bushing is formed. When the joint is assembled, these channels appear as spiral grooves and extend through the side plates of the bushing link.

Oil on the rollers quickly finds its way to the bushing surfaces. The channels act not only as reservoirs but as paths for the flow of oil through the side plates and down to the pins, where the lubricant is seized and spread by capillary action in a protective film over the entire contact surfaces of pins and bushings.

Action is such that, in conjunction with the turning motion of the rollers, the channels become in effect small pumps, literally forcing oil to all wearing parts of the chain. Service life will be increased appreciably by the positive lubrication of the parts which fail first in conventional chains.

The revolutionary construction of channel-lubricated Morse Roller Chain has made possible several other noteworthy improvements, the company says. Rollers are hardened and ground, turned out of solid bar stock alloy steel to attain greater accuracy and wearing strength. The cross section of the side plates has been increased, giving improved Morse Roller Chain at least the strength of conventional "heavy duty" sizes. The Morse patented spring lock cotter, which no amount of vibration can loosen or chew, is retained and is optional at no extra cost.

Single, double, triple, and quadruple widths, all standard pitches, and standard stock attachments are available in the improved Morse Roller Chain. Stocks are carried in key cities throughout the country.

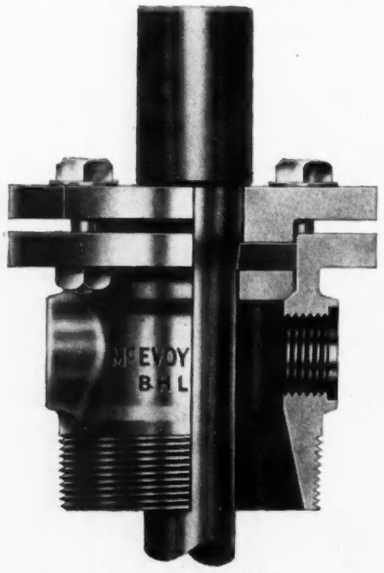


Morse Roller Chain

Tubing Head

McEVOY COMPANY

McEvoy Company, Houston, has announced a tubing head for low-pressure and pumping wells. This head, known as the McEvoy type BHL, introduces the idea of packaging to the well head field. Packaging is said to protect the product in shipment, facilitate handling, and simplify storage in warehouses.



McEvoy Type BHL

The new head features collar suspension of tubing for ease of assembly and self adjusting Neoprene packing for positive seal-off.

The packing consists of a thick Neoprene ring, sandwiched between upper and lower gland rings. Tubing weight bears directly on upper gland ring and compresses the Neoprene to seal around tubing and packing assembly. Packing may be tightened manually simply by taking up on flange hold-down bolts. Neoprene packing will act as a shock absorber if the tubing should be subjected to unusual shock.

Upper gland ring is split for ease of assembly.

The manufacturers claim that the head is completely reliable and is most economical to use on low-pressure, medium-depth wells. Simplicity of construction makes for low first cost without sacrificing quality in materials and machining.

Wire Line Groove Bar

LEBUS ROTARY TOOL WORKS

A device, known as the LeBus Wire Line Groove Bar, has been developed by LeBus Rotary Tool Works, Longview, Texas, for the purpose of regrooving and recentering of wire line sheaves and the grooving of wire line drums.

The tool is said to cut cost and improve performance of wire lines.

The bar is made for all sizes of line and can be applied to all sizes of drums and sheaves on any type of drilling equipment, such as draw works, spudding machines, crown blocks and traveling blocks. It is made of alloyed steel, thereby preventing hard steel wire lines from cutting into its surface. Because its application is simple and quick, different size bars can be applied readily when the operator changes the size of his wire line.

In applying the LeBus Wire Line Bar to draw works drums, it is wrapped around the spool in the same manner as the wire line. The starting point is made at the wire line opening of the flange, and the bar is heated at the right place to permit proper wrapping.

In regrooving and recentering wire line sheaves, a correct gauge groove is centered in the sheave by machining. The LeBus bar is attached by heating and bending to position, and fastening with six studs. The two ends of the groove bar are then electrically welded together and ground smooth.

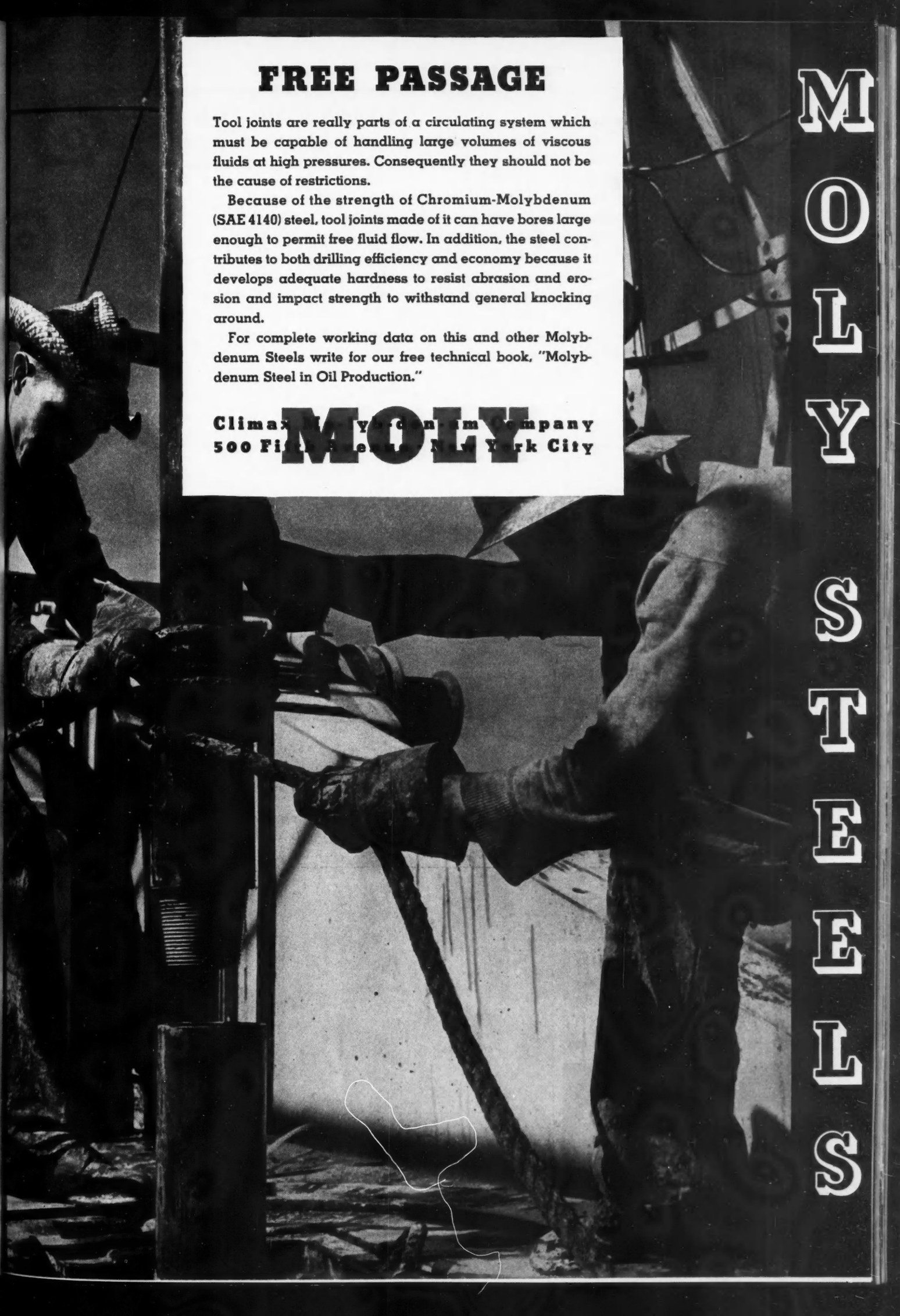
Acid Jet Gun

DOWELL, INCORPORATED

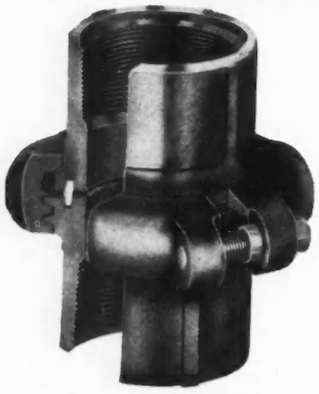
Dowell Incorporated, Tulsa, Oklahoma, has introduced a new tool known as the acid jet gun, which is said to increase the scope of acidizing by making possible the treatment of wells heretofore considered untreatable and by greatly improving the technique of acidizing.

The gun is designed to be run on the end of, or as a section of the regular tubing string. It may be used in conjunction with various auxiliary chemicals, packers, circulating tools or release valves and may be raised, lowered or rotated during the process to accord effective jetting on the entire section desired to be treated.

This tool permits streams of acid to be shot out horizontally or vertically against the wall or bottom of the hole. The acid is projected through small


FREE PASSAGE
Tool joints are really parts of a circulating system which must be capable of handling large volumes of viscous fluids at high pressures. Consequently they should not be the cause of restrictions.
Because of the strength of Chromium-Molybdenum (SAE 4140) steel, tool joints made of it can have bores large enough to permit free fluid flow. In addition, the steel contributes to both drilling efficiency and economy because it develops adequate hardness to resist abrasion and erosion and impact strength to withstand general knocking around.
For complete working data on this and other Molybdenum Steels write for our free technical book, "Molybdenum Steel in Oil Production."
MOLY
MOLY STEELS

Red-Rex
QUICK-JOINT
PIPE UNIONS



Red-Rex Malleable Unions—Designed for 500 lbs. working pressure and tested to 1,000 lbs. Made in both "short hub" and "long hub" types. Identical in construction throughout to high pressure steel union. Interchangeable seal rings.

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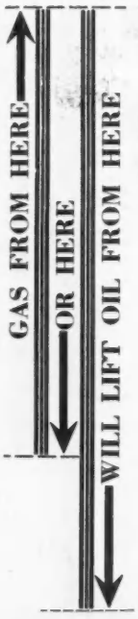

This choke provides a *controllable* and *removable* means of using gas from an upper formation or external source to produce oil from an underlying sand. Affords great saving over gas-lift method.

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PRESSURE CONTROL
INCORPORATED
DALLAS, TEXAS

NOTES FOR THE Equipment Buyer and User

diameter nozzles, designed for effectively removing Dowmetal pipe, cement, lime and calcareous deposits at a distance of 15 inches from the nozzle. This action, it is said, may be obtained under fluid such as oil, water, acid or any other liquid approximating the same viscosity as acid, at 1000 pounds per square inch differential pressure across the jets.

Thus, the tool will permit a number of important operations. It removes cement or mud sheaths from the walls of a well, jets out portions of a cement plug and cleans any type deposit from the face of the pay. Paraffin deposits may be removed from a well by jetting solvents through the gun. It will quickly remove Dowmetal pipe and the cement behind it. It also finds application in liner and screen perforation cleaning, in deepening a well in limestone formations and removing lime cavings.

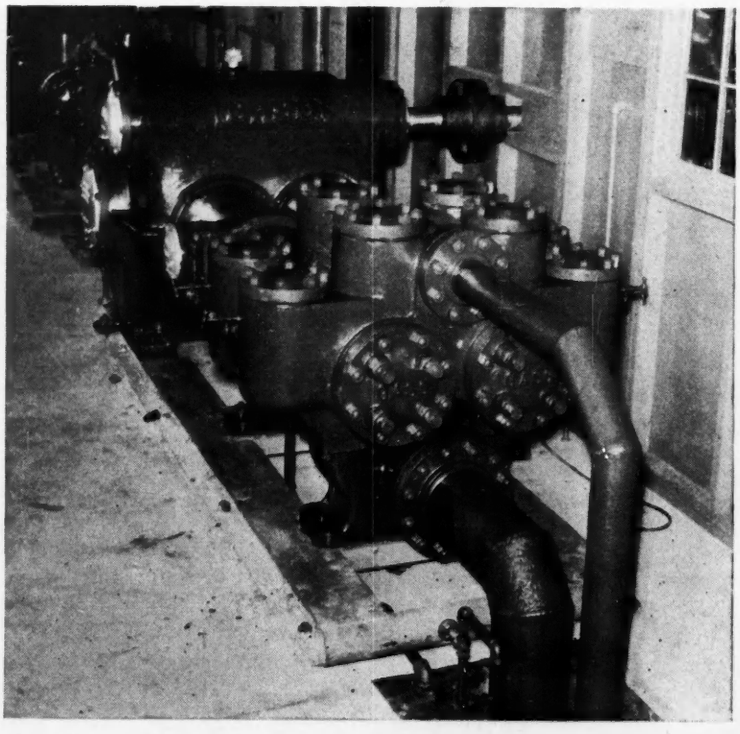
Small Pumps

The Centrifugal Pump Division of Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin has issued a new Bulletin B-6018 called "How to Get More Gallons at Less Cost," which is an enlarged and revised edition on their SS Unit close-coupled pumps. It gives an interesting, well illustrated presentation of these small size, but versatile in application, pumps, including construction details, performance data, capacity tables, dimension sheets, friction tables and other valuable data.

New Booklet Describes "Fine Chemicals"

An attractively ilustrated book on "Fine Chemicals"—the term for 63 organic chemicals recently added to those already industrially available—has just been published by Carbide and Carbon Chemicals Corporation. For the first time, the chemical industry is offered a well-balanced array of commercial in synthetic organic chemicals—including now a wide choice of chemicals in each major organic family. In addition, a glimpse of the future is given by listing many "research" products, samples of which can be supplied on request.

Complete tables of physical properties are included in the new book, enabling the chemist to tell rapidly the boiling points, water solubilities, flash points, and other necessary characteristics of these "Fine Chemicals." The newly available properties obtainable in the new products, in terms of evaporation rates, water solubilities, oil solubilities, and boiling points, are very desirable in certain processes. This book gathers together for the first time descriptions of these "Fine Chemicals" and condenses into a handy reference source many facts hitherto unpublished. Copies of the book can be obtained from Carbide and Carbon Chemicals Corporation, 30 East 42nd Street, New York, N. Y.



Three Gaso Figure 2652 pumps driven by Model 1742 Buda Diesel power units are used to boost oil from Crown to Kane, Pennsylvania, in the new pump station of Northern Pipe Line Company located in the former place.

NOTES FOR THE Equipment Buyer and User

Norma-Hoffmann Announces Sales Department Promotions

Norma-Hoffman Bearings Corporation, Stamford, Conn., announces promotion of C. W. Hedler, formerly manager of distributors' sales, and R. L. Miller—both long-time members of the general sales staff—to the position of assistant sales managers, reporting to H. J. Ritter, vice president, who continues to direct all sales activities of the company. Wesley G. Sargent, mechanical engineer formerly with Frick-Reid Supply Corporation of Pittsburgh, has been appointed assistant to Hedler who will continue in charge of distributors' sales.

Kappele to Represent Inferno in Oklahoma and Kansas

The Inferno Company, Shreveport, announces appointment of M. T. Kappele of 321 South Osage Street, Ponca City, Oklahoma, as its new representative for Kansas and Oklahoma. Kappele has been in the oil well supply business for many years, and will represent The Inferno Company in addition to several other well established lines.

M. T. KAPPELE

Frick-Reid Moves Houston Sale Force to Downtown Office

Frick-Reid Supply Corporation has moved its Houston sales office to 309 Gulf Building, which gives it the advantages of a downtown location. Those who will make headquarters at the new office are: C. B. Moore, D. T. Ottinger and E. D. Herron.

The Houston sales department of Beaumont Iron Works, whose products are distributed by Frick-Reid Supply Corporation, has moved to the same location. Representatives are C. J. Harris and Harry Zwerneman.

Waukesha Motor Company In New Quarters at Tulsa

Waukesha Motor Company has just completed a new sales and service building at 703 South Wheeling, Tulsa. Oil field motor power units and parts are available at this location.

The building has a floor space of 8000 square feet, and is air-conditioned. Construction is steel, brick and tile.

To celebrate the opening, Waukesha

Standco
NO-SMOKE
STANDCO BRAKE LINING
nothing novel—no bunk—but it gets the job done without scoring brake rims. See page 2100 Composite Catalog.
Standco Brake Lining Co.
HOUSTON

Question: Does OIL INDUSTRY Prefer ECOLITE?
Answer: YES!
90% OF ALL OIL COMPANIES USE IT
Why? Ecolite is SAFE—Handy to Carry—Easy to Use—Swings on a Pivot. It has wireless switch and is approved by Underwriters' Laboratories for use in presence of gases and vapors.
AVAILABLE AT SUPPLY STORES
ECONOMY ELECTRIC LANTERN CO.
3100 W. Cherry St. Milwaukee, Wis.
ECOLITE
IT PIVOTS—TILTS—FOCUSES

For Controlling Low Pressure Wells
BREWSTER Model 3-T Adjustable Flow Bean
This economical flow bean has been specifically designed for prorating and controlling those wells in low pressure areas. 1" graduated choke fitted with accurate indicator scale. 3000-pound test. Write for prices and special quantity discounts.
The BREWSTER CO., Inc.
Phone 2-3181 Shreveport, La.
New Iberia - Houma - Lake Charles - Rodessa Bunkie

For Month In-Month Out Service
USE MacCLATCHIE "AIRFLOTE" MUD PUMP VALVES
Because of the sealed-in air chamber that increases buoyancy . . . cuts fluid slippage . . . reduces impact . . . and gives more efficient valve action, MacClatchie "Airflote" Pump Valves insure superior performance and longer life under the toughest pumping conditions. Replaceable bodies, reversible inserts and everlasting stem caps give true MacClatchie economy.
MacClatchie "Streamlined" Pump Valves give you *high* quality at *lowest* cost! Of solid one-piece construction, they're streamlined at every point to assure unobstructed fluid flow. Valve Seats (interchangeable with "Airflotes") have 20% to 100% *more* striking surface than others, PLUS patented cross-bar construction.
All MacClatchie Valves are fully guaranteed against cutting out the pump. *MacClatchie will repair, without cost, any pumps so damaged when MacClatchie Valves are used!*
MacCLATCHIE MANUFACTURING CO.
COMPTON, CALIFORNIA. HOUSTON, TEXAS.
EXPORT: GEO. R. WOODS, 17 BATTERY PLACE, NEW YORK, N. Y.

Motor Company held open house October 20. More than 200 visitors were greeted by J. E. DeLong, president, who made a special trip from Waukesha, Wisconsin, for the occasion, and by Arch F. Campbell, general manager at Tulsa.

J. C. Baseheart, Mid-Continent manager, The Buda Company, is contacting the Tulsa representative office, Buda Engine Sales and Service. His headquarters are in Fort Worth, where Mid-Continent offices are located.

C. V. Lally, who has for several years been associated with Pittsburgh Steel Company as manager of seamless steel tube sales, has resigned.

Caterpillar Western Sales Manager Dies

H. H. "Jack" Chambers, 47, Western sales manager of Caterpillar Tractor Company, died at Oakland, California, October 21, after a lingering illness.

Long service with "Caterpillar" had taken him to all parts of the United States, and had given him a wide acquaintance.

Chambers was born at Raymond, Illinois. Spending his boyhood days in Illinois, he came to Holt Manufacturing Company, "Caterpillar" predecessor at Peoria, Illinois, in December, 1914, obtaining employment in the shop, and advanced to service engineer in 1921.

Chambers resigned in 1925, but returned three years later to take an important assignment in the company's sales department. A year later, he was named sales manager of the western division with headquarters at San Leandro, California, the position he held until his death.

Allis-Chalmers Extends Texrope Drive Line

Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin, has extended its line of Texrope demountable rim type sheaves to certain sizes carried in stock and a range of sizes which can be made promptly to order. These cast iron sheaves all consist of a substantial bushing on which may be mounted a sheave rim of desired number of grooves and pitch diameter.

This demountable rim type of sheave originally was introduced primarily for use on oil field equipment. However, since this type provides an easy method for changing sheaves without removing the hub from the shaft, it can be used to advantage for any application requiring a limited number of fixed steps in speed change. These sheaves, more fully described in leaflet B-6041, are available for use with "C" and "D" section belts.

Belt Fastener

Bulletin No. V-200 has been issued by Flexible Steel Lacing Company, 4607 Lexington Street, Chicago, covering a new line of Alligator V-Belt Fasteners for "B," "C" and "D" section V-Belts. The fasteners are used only on crosswoven fabric V-Belts and should not be used to shorten or repair stretched out or broken endless cord V-Belts. The bulletin shows how the fasteners are applied and illustrates various types of applications where endless V-Belts could not be used without costly dismantling of the drives.

A.P.I. Publishes "Finding and Producing Oil"

American Petroleum Institute, Division of Production, Dallas, Texas, has ready for distribution an interesting book, "Finding and Producing Oil." The 338-page volume is a manual of information on the business of finding and producing oil, including a digest of laws pertaining thereto, and a list of persons, firms, or corporations engaged directly or indirectly in such companies.

General sections in the book include: Geological Methods of Oil Exploration; Geophysical Methods of Exploration; Methods of Drilling; Sampling, Coring, and Bore-Hole Surveying; Production Methods; Measuring, Sampling, and Testing Oil Products; Voluntary Cooperative Activities; Vocational and Scholastic Training; Dissemination of Information; Oil & Gas Conservation Laws; Voluntary Trade Associations and Professional Societies; Producers of Oil (list of directories available); Manufacturers, Supply Houses, and Various Servicing Companies (a list of these); Drilling Contractors (a list of these); and Fundamental Research.

References and bibliographies are especially complete after each chapter on finding and producing oil.

The book is available from the various Institute offices at $3.00 per copy postpaid in the United States; $3.50 each postpaid to all foreign countries.

It's a Fact — Johnston

90 MILLION CUBIC FEET OF PURE AIR PER DAY WAS PRODUCED FROM A WELL DRILLED IN 1935 OUTSIDE OF MONUMENT, NEW MEXICO WHICH IS NEAR THE CARLSBAD CAVERN COUNTRY. AT 1840 FEET THE WELL DRILLED INTO A POROUS FORMATION AND IMMEDIATELY BLEW OUT, THROWING THE DRIVE BUSHINGS UP THROUGH THE RIG AND ALMOST BLOWING THE DRILL PIPE OUT OF THE HOLE. THE WELL BLEW FOR NINE DAYS AND AT THE END OF THAT TIME THE GAUGE READING SHOWED THAT 810,000,000 CUBIC FEET OF **PURE AIR** HAD BEEN PRODUCED. THE WELL WAS FINALLY DRILLED TO PRODUCTION AT 3,700 FEET, BUT A YEAR LATER 1,200 LBS. OF **AIR** PRESSURE WAS MEASURED ON THE SURFACE CASING!

YOU NEVER KNOW EXACTLY WHAT YOU'RE GETTING INTO WHEN YOU DRILL A WELL — BUT THERE IS ONE THING SURE ... YOU CAN BE MIGHTY CERTAIN OF THE PRODUCTION POSSIBILITIES OF YOUR OIL FORMATIONS WITH A **JOHNSTON FORMATION TESTER.** A JOHNSTON TEST WILL TELL YOU QUICKLY, ACCURATELY AND ECONOMICALLY — WITHOUT THE NEED FOR SETTING CASING — EXACTLY WHAT AND HOW EVERY FORMATION ENCOUNTERED IN YOUR WELL IS GOING TO PRODUCE!

WRITE FOR JOHNSTON ENGINEERING BROCHURE 310-C WHICH GIVES THE COMPLETE FACTS ON HOW YOU CAN DRILL BETTER WELLS AT LESS COST WITH A JOHNSTON FORMATION TESTER AND JOHNSTON TESTING METHODS. NO OBLIGATION, OF COURSE!

Johnston

FIVE DOLLARS ($5.00) WILL BE PAID FOR EACH INTERESTING OR UNUSUAL FACT CONCERNING THE PETROLEUM INDUSTRY (EITHER IN THE UNITED STATES OR ABROAD) WHICH IS USED IN THIS SERIES OF JOHNSTON ADVERTISEMENTS. SUBSTANTIAL PROOF MUST ACCOMPANY EACH CONTRIBUTION. WHEN TWO OR MORE SIMILAR FACTS ARE SENT IN, THE AWARD WILL BE GIVEN TO THE FIRST ONE RECEIVED ...

M. O. JOHNSTON
Oil Field Service Corp.
3117 SAN FERNANDO ROAD ALbany 0186
LOS ANGELES, CALIFORNIA
Bakersfield 2794 Ventura 5621
"Servicing California and Selling Exclusively Foreign"

FORMATION AND CASING TESTING — JOHNSTON

JOHNSTON
Oil Field Service Corp.
5702 NAVIGATION BLVD.
HOUSTON, TEXAS
"Servicing Mid-Continent and Gulf Coast"

"WHY SET CASING BEFORE YOU KNOW!"

Squeaks from the Bull Wheel

Full Evening

"Did you fill your date last night?"

"I hope so. She ate everything in sight."

Feared Prejudice

The accused had been convicted when it was proved on further evidence that he had actually been in prison at the time the crime was committed.

"Why didn't you say so?" demanded the judge of the prisoner.

"I was afraid of prejudicing the jury against me."

Hard to Take

"What is that gurgling noise?"

"I'm trying to swallow that line you're throwing."

No Risk

"If you loved me, why did you refuse me at first?"

"Just to see what you would do."

"But I might have rushed off without waiting for an explanation."

"Hardly, I had the door locked."

Proper Start

"I've got a surprise for you—two tickets for the theater."

"Fine, I'll start dressing at once."

"Yes, do. The show is for tomorrow night."

Ambidextrous

"How did you learn to use both hands equally well, Pat?"

"Shure now and me faether, he always said to me: 'Pat, learn to cut your fingernails with yure left hand, fer some day ye might be afther losing yer right hand.'"

Astigmatism

"So your son had to leave college on account of poor eyesight?"

"Yes, he mistook the dean of women for a coed."

Minor Point

"So your client was acquitted of murder. On what ground?"

"Insanity. We proved that his father had spent five years in an asylum."

"But he didn't, did he?"

"Yes. He was a doctor there but we had no time to bring that fact out."

Heroic

"My father is a brave man. He killed five lions and an elephant in Africa, single-handed."

"Bosh, that's nothing, my dad bought a new sedan when ma wanted a coupe."

Patriotism

"Who are those people doing all the cheering?" asked the recruit as the soldiers marched to the train.

"Those," replied the veteran, "are the people who are not going."

Bilingual

"I understand his wife speaks two languages."

"Yes, one for company and the other for her husband."

One More

"Another bite like that, young man, and you'll leave the table."

"Another bite like that and I'll be finished."

Not Appreciative Enough

"Only one kiss, then I'll be off."

"If that is all you want, you must be off."

Coincidence

"What an unusual pair of socks you have on—one red and the other green."

"Yes, and I have another pair just like them at home."

Long Wait

"Are you the girl who took my order?"

"Yes, sir."

"Well I declare. You don't look a day older."

Short Memory

Well, son what did you learn in school today?

I learned to say "Yes, sir" and "No, sir" and "Yes, ma'am" and "No, ma'am."

You did, eh?

Yeah.

Not That Kind

And your husband has a prosperous business, I suppose?

Oh, yes, he is taking in a lot of money. Only last night he told me a receiver was to be appointed to help him.

A Good System

I always feel better after a good, hard cry.

So do I. It sort of gets things out of your system.

No, it doesn't get anything out of my system, but it does get things out of my husband.

His Money's Worth

"Pat, I'm afraid I shall have to charge another four bits. You're such a big eater."

"For heaven's sake don't do that! I'm killin' myself already tryin' to eat what I'm payin' for now."

A Jump Ahead

A candidate for the police force was being verbally examined.

"If you were by yourself in a police car and were pursued by a desperate gang of criminals in another car doing forty miles an hour along a lonely road, what would you do?"

The candidate looked puzzled for a moment. Then he replied: "Fifty."

Pretty Warm

"You have made your hero too hot headed, I'm afraid."

"How do you mean?"

"Well, he has a lantern jaw to begin with. And so his whole face lit up! His cheeks flamed; he gave a burning glance, and then, blazing with wrath and boiling with rage, he administered a scorching rebuke."

Masculine and Feminine

"What's inertia, Dad?"

"Well, if I have it, it's sheer laziness; but if your mother has it, it's nervous prostration."

Deletion

"I took the recipe for this cake out of the cook book."

"You did perfectly right, dear. It never should have been put in."

Gotkool
WATER CANS
& COOLERS
GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . .
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WATER COOLER
GOTT WATER COOLER
Made in 3, 5, 8, 10, and 20 gallon sizes.
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GOTT WATER CAN
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

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...r every drilling and production service

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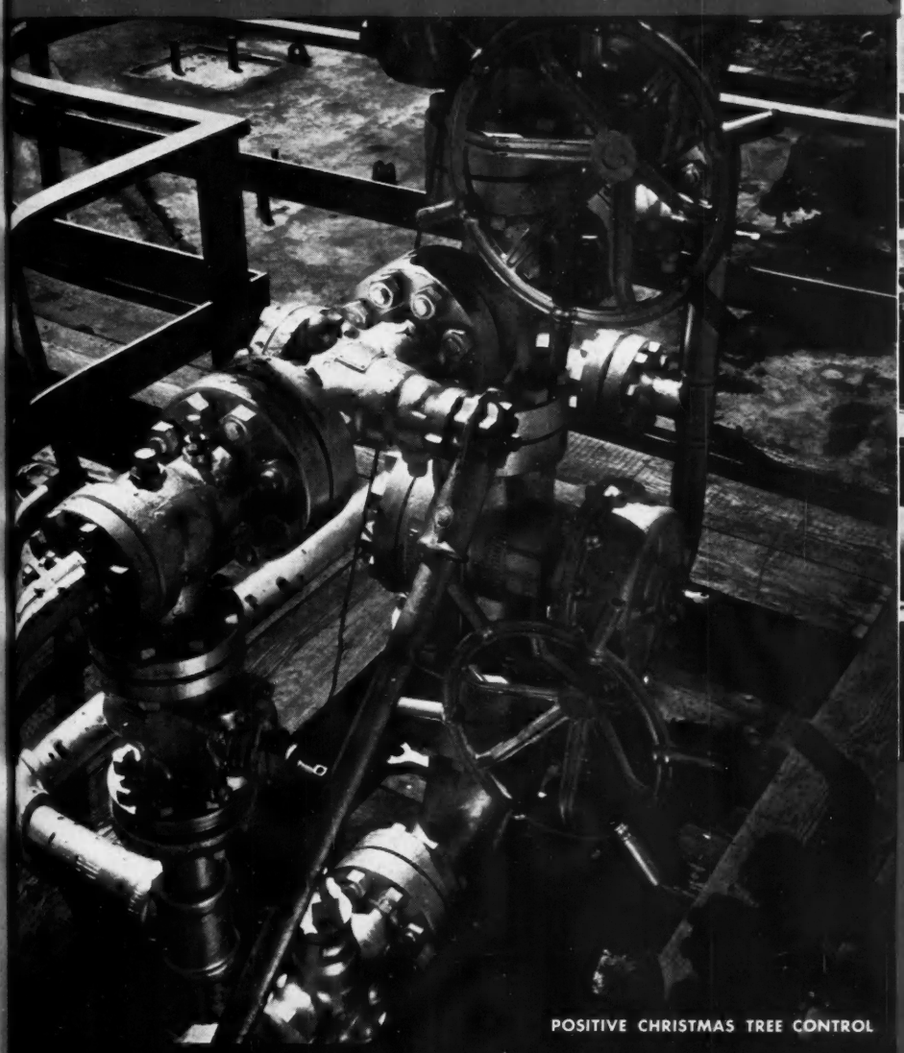
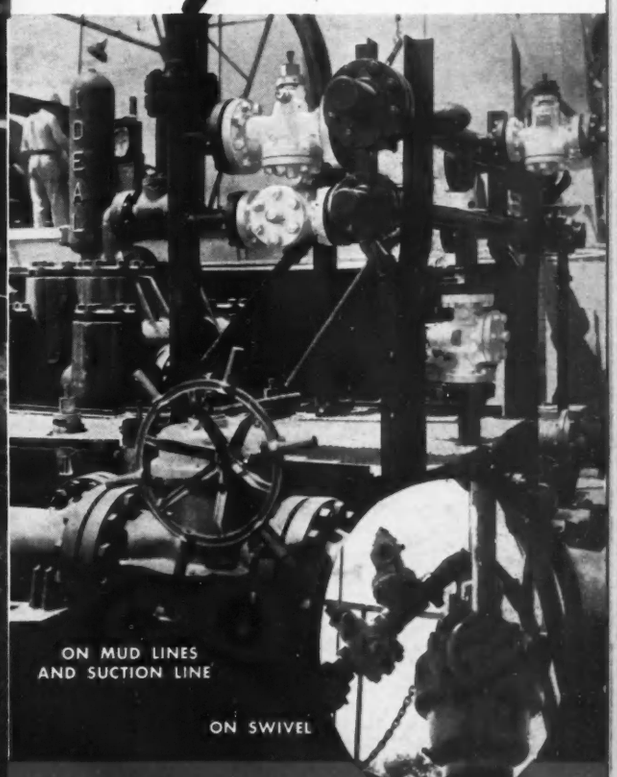
They hold!

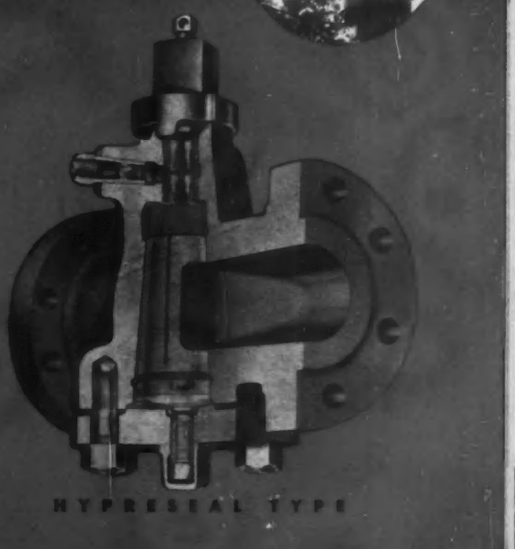


POSITIVE CHRISTMAS TREE CONTROL



ON MUD LINES
AND SUCTION LINE

ON SWIVEL



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A Subsidiary of PITTSBURGH EQUITABLE METER CO.

WORLD'S LARGEST MANUFACTURERS OF LUBRICATED PLUG VALVES; GASOLINE, OIL & GREASE METERS

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POINT TO REMEMBER ABOUT WORKOVER JOBS

TWO PORTLAND CEMENTS—BOTH MADE FOR OIL WELLS

USE 'STARCOR'—for deep wells, high temperatures, extra sulphate resistance.

USE 'INCOR'—for wells of moderate depth, and low temperatures.

YOU could stuff a cavity with sand, but it wouldn't stay there long—water would wash it away. It takes a free-flowing liquid, which STAYS liquid till the job is done, and then really gets HARD. That's 'Starcor'. Proof:

A leading company, operating at Refugio, has plugged back and squeezed the upper sand in over ten wells. 'Starcor', the delayed-setting cement, was used for the squeeze. Not a single failure. Point to remember, next time you have a plug or squeeze job.

Use 'Starcor'* for squeeze jobs, and for deep-wells, high temperatures and extra sulphate resistance. Use 'Incor'* for wells of moderate depth. Use Lone Star for construction work above-ground. Portland cements, all—backed by Lone Star's record for quality, uniformity and all-around dependability over more than a quarter century.

*Reg. U. S. Pat. Off.

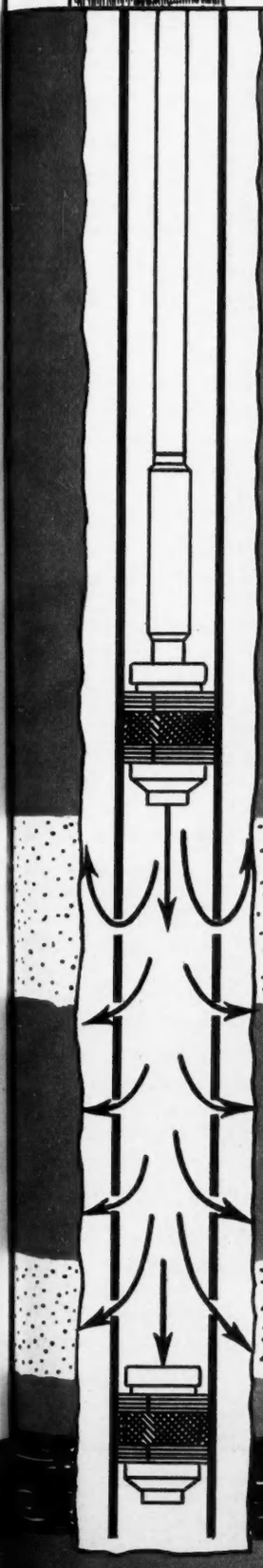
LONE STAR CEMENT CORPORATION

MAKERS OF LONE STAR CEMENT • 'INCOR' 24-HOUR CEMENT • 'STARCOR' CEMENT

WATER EXCLUSION

BY SQUEEZE CEMENTING

A RESULT THAT THE BAKER CEMENT RETAINER IS ACCOMPLISHING FOR OPERATORS DAILY



BAKER CEMENT RETAINER APPLICATIONS INCLUDE:

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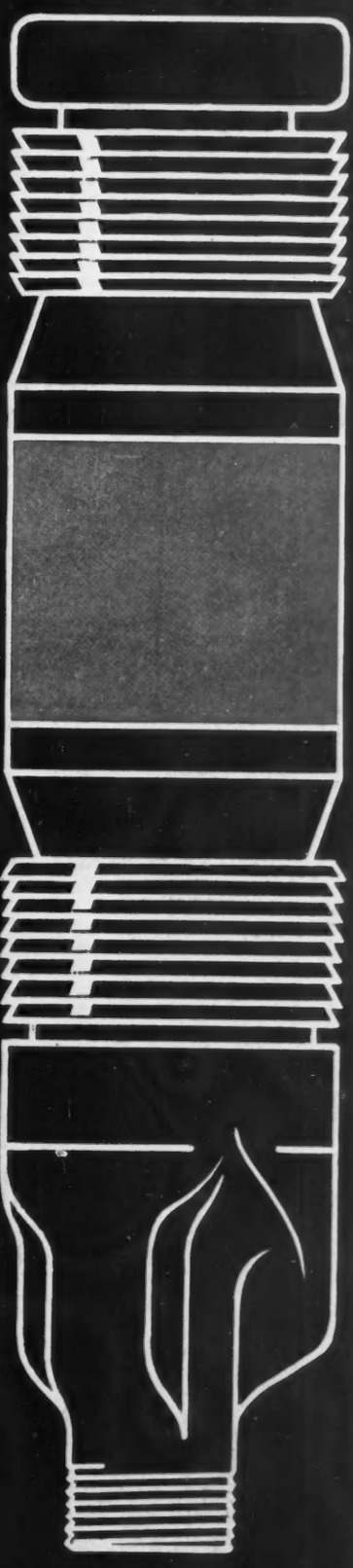
- CEMENTING BEHIND SECTIONS OF PIPE
- REDUCING GAS/OIL RATIOS
- SERIES CEMENTING
- PLUGGING OFF BOTTOM FLUIDS
- PLUGGING BACK TO UPPER ZONES
- TESTING UPPER CASED FORMATIONS
- AS A HEAVING PLUG
- AS BRIDGE PLUG



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LOOKING AHEAD

WITH THE EDITOR

The Industry Looks Toward Chicago.

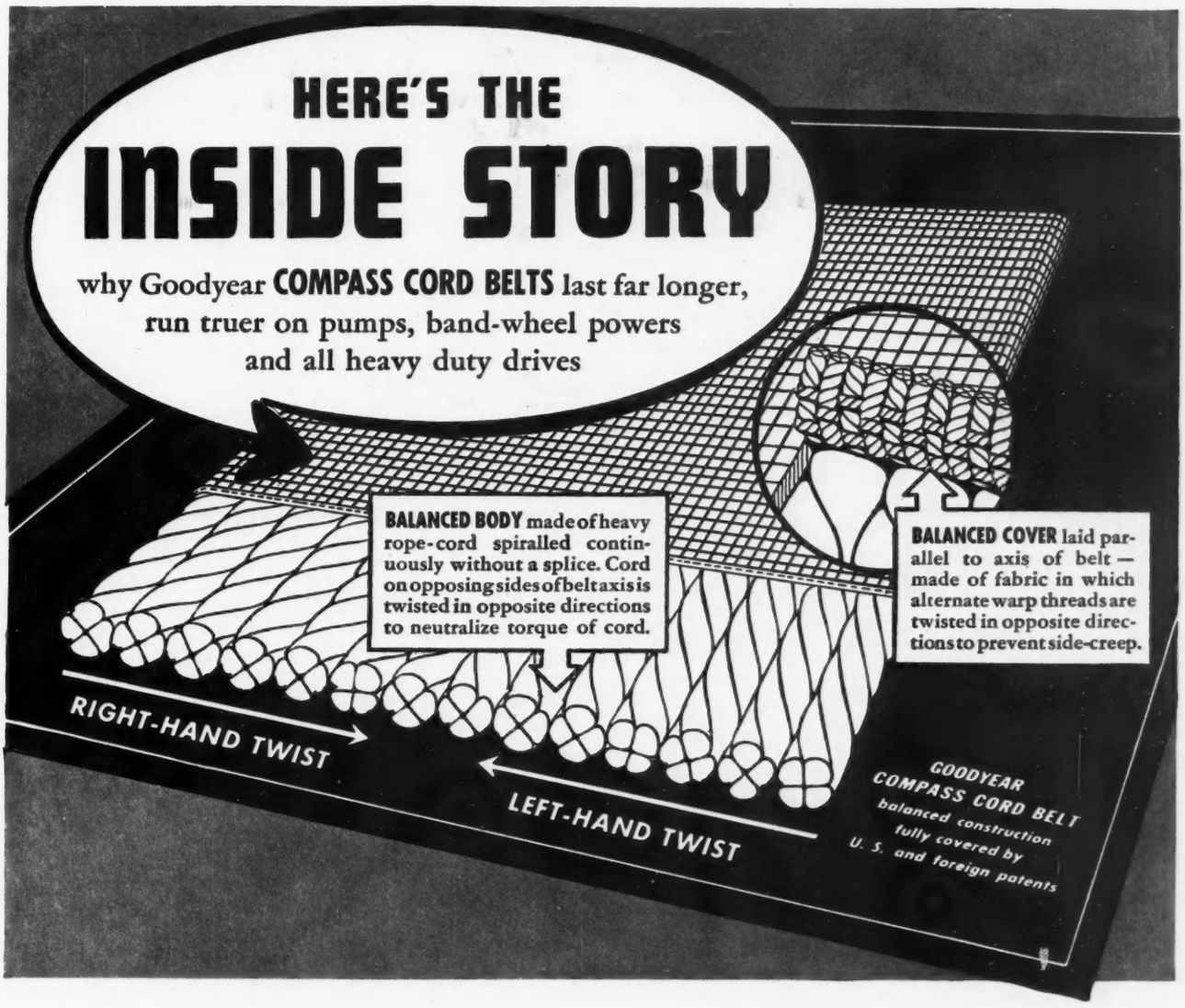
THE coming week-end will find more than 3000 oil men from every corner of the nation heading toward Chicago for the year's largest gathering of personnel from this industry—the Twentieth Annual Meeting of the American Petroleum Institute. In addition, several thousand additional oil men, unable to leave their respective distant headquarters, will be watching with interest the developments scheduled to take place at this convention during the week of November 13-17.

Here important problems and progress in every branch of the industry are to be discussed in the more than 50 addresses to be delivered. Political, legislative, technological, taxation and public relation trends are all to be heard from the speaker's platform, and will be studied in the more than 100 committee meetings that will be held.

New thoughts and a consolidation of ideas will be achieved in many instances, not only in the committee meetings and group sessions, but in innumerable impromptu lobby chats that will be continually in existence in every nook.

Seven representatives of THE OIL WEEKLY will be among those making the trek to the Institute's annual meeting, and all are looking forward eagerly to greeting old friends, making new acquaintances, and learning much of value and interest.

The OIL WEEKLY, Published every Monday. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.


HERE'S THE
INSIDE STORY
why Goodyear COMPASS CORD BELTS last far longer, run truer on pumps, band-wheel powers and all heavy duty drives
BALANCED BODY made of heavy rope-cord spiralled continuously without a splice. Cord on opposing sides of belt axis is twisted in opposite directions to neutralize torque of cord.
BALANCED COVER laid parallel to axis of belt — made of fabric in which alternate warp threads are twisted in opposite directions to prevent side-creep.
RIGHT-HAND TWIST
LEFT-HAND TWIST
GOODYEAR COMPASS CORD BELT
balanced construction fully covered by U. S. and foreign patents

"WHY is it," oil men regularly ask us, "that the COMPASS Cord belt lasts so much longer, runs so much truer than other so-called cord belts?"

The answer lies in Goodyear's *patented* method of cord construction that no other manufacturer can employ. To explain:

The problem in building cord belts is the torque developed in the cords which tends to run the belt off the pulleys.

Balanced—and true!

In the COMPASS Cord belt torque is equalized by twisting the cords on opposite sides of the belt axis in reverse direction. Likewise alternate warp-threads in the fabric envelope are twisted in opposing directions. This *balanced* construction in both cords and cover neutralizes any tendency of the belt to travel toward either side and insures a perfectly true-running belt.

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That's why it is important to specify "Goodyear COMPASS Cord" when ordering belting for your tough drives. The G. T. M. — Goodyear Technical Man — will be glad to give you a demonstration of COMPASS' superior performance. To bring him to your rig, write Goodyear, Akron, Ohio, or Los Angeles, California — or phone the nearest Goodyear Mechanical Rubber Goods Distributor.

Compass — T. M. The Goodyear Tire & Rubber Company.

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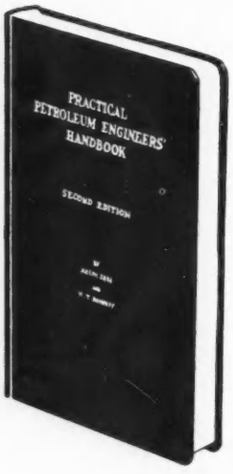

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This handbook was compiled and published for the purpose of saving the time of operators, engineers, superintendents, foremen and others.

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LETTERS TO THE EDITOR

South Texas Hot!

DEAR SIR:

This is to express our appreciation for the excellence and usefulnes of the South Texas Number of THE OIL WEEKLY.

We believe that this edition is of particular value to operators like ourselves, the limit of whose activity does not warrant the employment of a geological and land department. Under these circumstances, the wealth of information which you gave concerning the history, present activity, and the predictions for the future of South Texas is invaluable to operators of our type.

We feel that a periodic repetition of this number, bringing all of the information up-to-date, would be very helpful and would be appreciated by all of the oil men in the South Texas area.

C. O. EDDY,
Auditor,
WEST VIRGINIA GAS CORPORATION,
CRUDE OIL DIVISION,
San Antonio, Texas

DEAR SIR:

. . . Wish to express my pleasure on receiving copy of your recently published South Texas issue.

In my particular work, various questions regarding this district come up from time to time that in the past I have found can be readily answered by your South Texas numbers, and with a minimum of effort on my part. I have gone over your most recent issue at length, and note how excellently the old information has been brought up to date and new features added . . .

JOHN R. PEDIGO,
San Antonio, Texas. Geologist,

DEAR SIR:

I have not had time to really read it, but I did glance through the Special Edition on South Texas.

. . . It appears to have a wealth of information that could be referred to from time to time, and I know of no other magazine that has such information in it as THE OIL WEEKLY'S Special Edition on South Texas.

I want to compliment you on this edition, and would like to see it a yearly edition.

AL BUCHANAN,
President, Al Buchanan, Drilling Company,
San Antonio, Texas.

DEAR SIR:

Congratulation on the nice issue on South Texas of THE OIL WEEKLY that you published a couple of weeks ago. It certainly was a nice piece of work . . .

J. M. FROST, III,
Geologist, DeGolyer & MacNaughton,
Dallas, Texas.

DEAR SIR:

We wish to take this opportunity to express our appreciation of the complete survey of the South Texas district contained in your issue of October 9, and trust that you will see fit to continue same with up-to-date information from time to time.

W. C. MARRS,
H. H. Coffield, Independent Operator,
Rockdale, Texas.

DEAR SIR:

We want to take this opportunity to express our appreciation for the splendid work in compiling the complete survey of the South Texas district in THE OIL WEEKLY issue of October 9. If at all possible, we would like for you to continue this book in the future, bringing the data up to date from time to time and being an independent operator this information would be valuable for our files.

M. W. MUECK,
Office Manager, Adams & Lyles, Oil Producers,
Lockhart, Texas.

THE OIL WEEKLY desires to cover all important trends and will continue to give special attention to South Texas when operations there justify. Special South Texas issues published thus far: Oct. 9, 1939; Aug. 30, 1937; Sept. 28, 1936; Sept. 10, 1934.

Other important areas to receive special attention in the past: Texas-Louisiana Gulf Coast, West Texas-New Mexico, Western Kansas, Ark-La-Tex (Tri-State Area), Illinois.

Currently, Mississippi is "Oil's Newest Domain." (See article this issue and others to follow.)

Illinois Question

DEAR SIR:

Our organization appreciates the manner in which you have presented our stand on conservation and proration in Illinois. It is our candid belief that the whole subject of conservation should be fully aired in the papers and before the legislation of this state. We are glad to see that Governor Horner has appointed an economist from the University of Chicago to study the oil situation for him, and we hope that much will come from the airing of the whole subject.

There is no doubt to our minds that the fight here is not conservation, but proration for the benefit of the major concerns, whose object is not conservation of oil, but to kill off independent refiners and marketers. As an engineer I have always believed in conservation, and I feel certain that most of the members of our association feel the same way, but when conservation is used as a means to put proration over, we feel that we have a just cause to be up in arms, and we are fighting bitterly to see that not only the oil producers of the state are treated fairly, but any legislation which may be forthcoming will be for the benefit of the landowners of the state as well.

This fight is not one of personalities, but one for a principle. We also want to point out that the proposed conservation bill that we discussed before the Budgetary Commission last week bears the names of three attorneys, supposedly acting for independent concerns, but every one is connected

[*Continued on page 72*]

THE OIL WEEKLY

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The Oil Man's Calendar

NOV.	
13-17	**American Petroleum Institute, Stevens Hotel, Chicago.**
14	**25-Year Club, Stevens Hotel, Chicago.**
15-17	**American Institute of Chemical Engineers, Providence, R. I.**
DEC.	
4- 7	**American Society of Mechanical Engineers, Philadelphia.**
4- 9	**Exposition of Chemical Industries, Grand Central Palace, New York.**
14-15	**Petroleum Electric Power Association, Texas State Hotel, Houston, Texas.**
APR.	
10-12	**American Association of Petroleum Geologists, Chicago.**
11-12	**American Petroleum Institute, Eastern District, Division of Production, Columbus, Ohio.**

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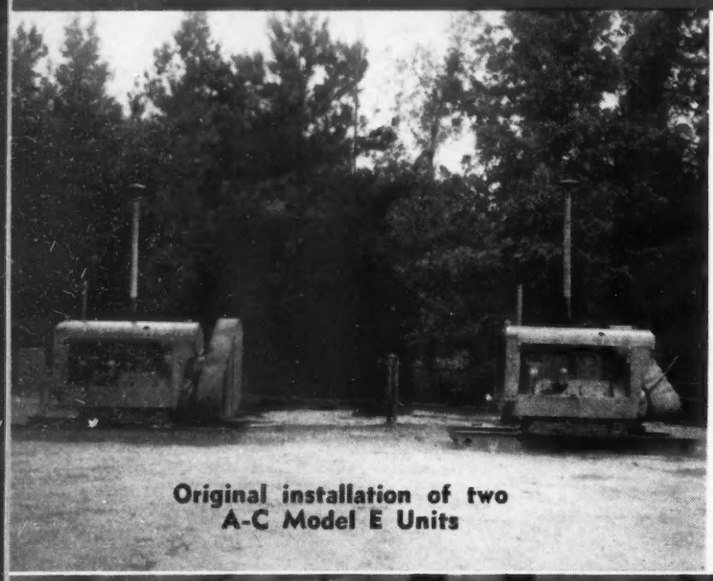
ALLIS-CHALMERS....
Power Engines on the Line



Original installation of two A-C Model E Units

It's becoming more common every day, to find these heavy duty, slow speed engines on jobs where continuous service at low cost is a prerequisite.

The five sizes of A-C Engines enable you to select a unit to fit the particular power requirements—No need to underpower—Unnecessary to overpower.

Model L—Torque 590 ft. lbs. at 650 to 700 r.p.m.
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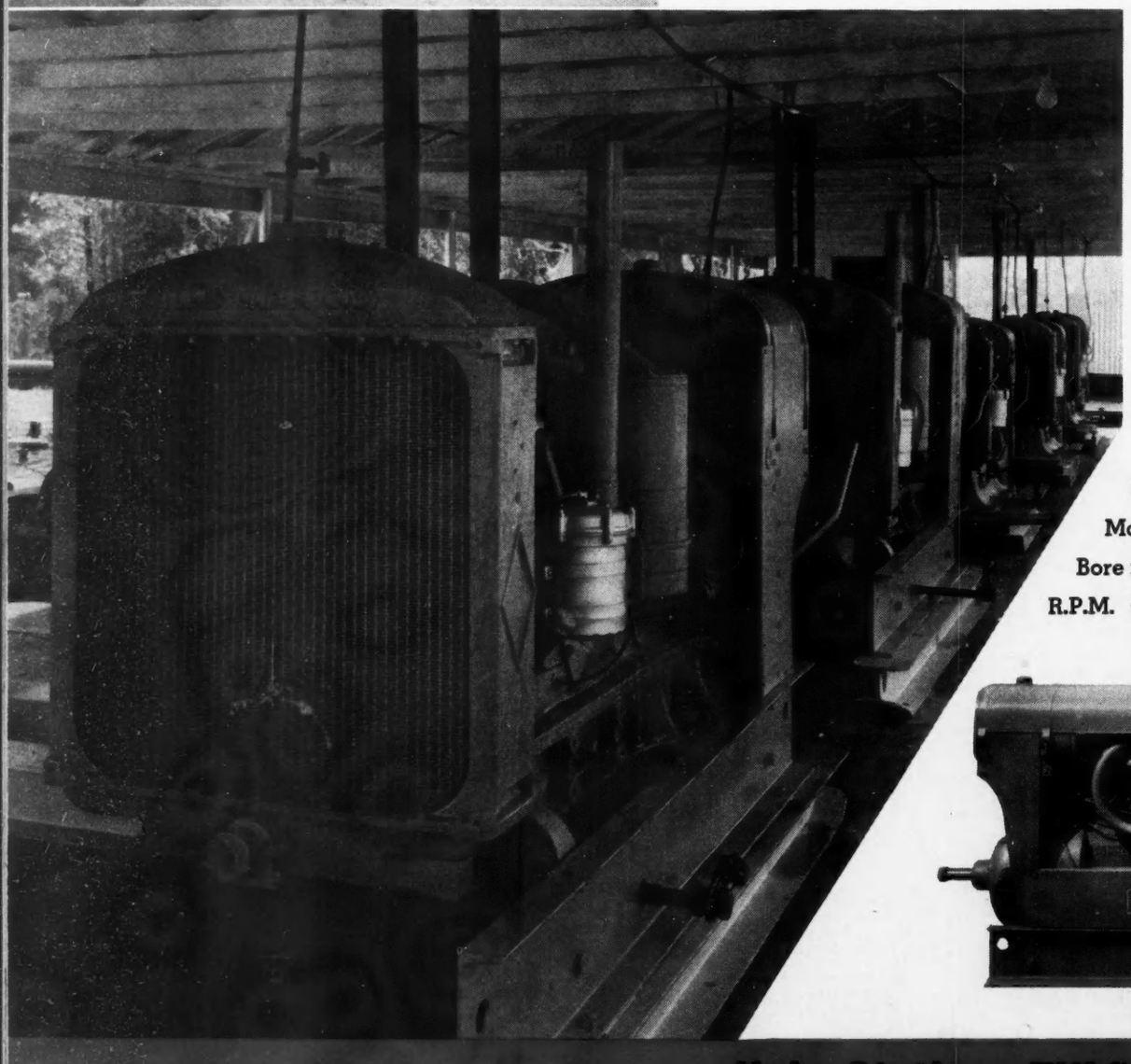
Model W—Torque 128 ft. lbs.
Model B—Torque 74 ft. lbs.

All burn gasoline, natural gas, or distillate. All engines are equipped with full throttling governor. Each unit is priced, tested, and delivered complete with accessories, fan, water pump, air cleaner, and oil filter—ready to go.



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Model E, cylinders..... 4
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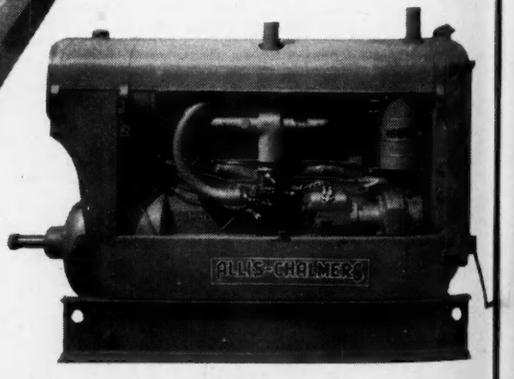
R.P.M. Continuous.....600-1200



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